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CANADIAN HEALTHCARE MANAGEMENT INC.

Operational Review of Hôpital régional de Sudbury Regional Hospital

CONFIDENTIAL FINAL REPORT

November 1, 2002

Ontario

Ministry of
Health and Long-Term Care

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103-03216/

1. EXECUTIVE SUMMARY

INTRODUCTION

The Need for An Operational Review

Hôpital régional de Sudbury Regional Hospital (HRSRH) was established in June 1997 and received the programs and services of the former Sudbury General, Sudbury Memorial and Sudbury Laurentian Hospitals. HRSRH is carrying out HSRC-directed capital redevelopment to accommodate all hospital services on the Laurentian site. In the fall of 2000, the hospital requested an operational review in response to five years of operating deficits, an increasingly significant working capital deficit, and significant cost overruns on the capital redevelopment project.

The Scope of the Operational Review Project

The Ministry of Health and Long-Term Care (MoHLTC) and HRSRH initiated this operational review in January of 2002 to better understand the issues faced by HRSRH and the steps to be taken by the HRSRH to improve performance, to achieve a positive financial position and realize its capital redevelopment consistent with MoHLTC approvals based on HSRC directions. The project is expected to:

- result in an objective analysis of governance, management and medical staff structures, decision-making and communication processes at HRSRH and to identify recommendations for strengthening the same;
- identify factors impacting on HRSRH's financial situation and develop a plan for the HRSRH to achieve balanced financial position;
- identify strategies to improve clinical utilization;
- identify the impact of restructuring and the operation of multi-site locations on financial and clinical objectives, efficiencies and improvements, including that which can be realized in the shorter term while on multi-sites and in the longer term on a single site;
- review capital project management and identify options to complete the capital project within a realistic timeframe that consider the impact on operations and funding; and
- provide a recovery plan and an implementation plan for HRSRH to address these issues to ensure HRSRH can achieve necessary operational improvements and a balanced financial position according to a specified timetable.

The Operational Review Process

This following report summarizes the methods, findings and recommendations of the Operational Review consultants. The review included extensive and rigorous data collection and analysis, comparative benchmarking of HRSRH to peer hospitals, departmental reviews, surveys, interviews and focus groups involving HRSRH staff and other community stakeholders. A great deal of the project work was supported by three working groups comprised of MoHLTC and HRSRH staff, the consultants and their expert advisors:

- A Financial Working Group supported the detailed review of financial management and condition, as well as the selection of a cohort of hospitals and the resulting detailed benchmarking analysis of HRSRH departmental efficiency;
- A Clinical Working Group supported the implementation of a retrospective and a concurrent review of clinical utilization opportunities, a comparative benchmarking analysis of HRSRH clinical efficiency, as well as an analysis of HRSRH referral pattern trends, market share and population utilization; and
- A Capital Working Group supported the review of the capital project, and the development of options for completing the capital project and their evaluation.

The progress, findings and recommendations of the working groups, as well as the consultants' review of governance, management and medical staff were overseen and scrutinized by a Steering Committee with representation from HRSRH and MoHLTC.

The HRSRH and the MoHLTC are currently working together, using these findings and recommendations, to develop a recovery and implementation plan. While there is still significant work to be done to ensure that HRSRH achieves a balanced operating budget, improves its working capital position, and completes its capital project, the consultants would like to acknowledge the dedication, hard work, and commitment of the many HRSRH and MoHLTC staff, as well as other community stakeholders that have participated in the Operational Review.

OVERVIEW OF HRSRH

The Hôpital Régional de Sudbury Regional Hospital (HRSRH) was established in June 1997 when the legacy hospitals – Laurentian Hospital, Memorial Hospital and Sudbury General Hospital – ceased to exist and a new hospital was created. HRSRH serves a multi-cultural population that includes a sizeable aboriginal community. Sudbury's region is designated under the French Language Services Act and, as such, HRSRH provides services in both official languages. HRSRH's referral population is below the provincial average in socio-economic status and above the provincial average in morbidity and mortality. As a modified "C" hospital with tertiary referral programs, HRSRH provides a wide range of acute inpatient; rehabilitation, chronic care, outpatient and community care services. Some of the tertiary care programs currently offered include a regional trauma centre, a regional nephrology program, a children's treatment centre, a full tertiary care cardiology and cardiac surgery unit, regional rehabilitation services, a regional oncology program and genetics program. HRSRH is working closely as host hospital to the Northeastern Ontario Regional Cancer Centre and partnering with other Northeastern Ontario hospitals, the North Eastern Mental Health Centre (NEMHC), Sisters of St. Joseph of Sault Ste. Marie and the Community Care Access Centre (CCAC).

On December 16, 1996, the Health Services Restructuring Commission (HSRC) issued its report and directions for restructuring hospital services in Sudbury. In response to these directions, the three local acute care hospitals (Laurentian, Memorial and Sudbury General) ceased to exist on June 1997 and HRSRH was created as a single new entity. The HSRC's Rural and Northern Hospital Networks Report for the Sudbury area issued in March 1999 defined HRSRH as the principal tertiary referral hospital for a network that includes hospitals in Espanola, Little Current and Mindemoya, Blind River and Elliot Lake.

The HSRC's directions called for the renovation and expansion of the Laurentian site to provide all acute inpatient, rehabilitation and chronic care services. The latest budget estimates for the capital project are up considerably from the original HSRC estimate of $84.6 million. The hospital has been operating in a deficit position every year since the amalgamation in 1997. The deficit for the 2001/2002 fiscal year stands at $25.6 million. The working capital deficit for 2001/2002 is $70.0 million, up from $35.1 million in 2000/2001 as indicated in HRSRH Financial Audited Statements.

Trends in Financial Performance
Both expenses and revenues have been increasing steadily over the period from 1996/97 to 2001/2002. The large operating deficit of $25.6 million in 2001/02 is the result of a $6.3 million increase in expenses coupled with a $10.3 million drop in revenues. The sharp rise in the working capital (cash flow) shortfall in 2001/02 of $70.0 million is the result of both operating and capital fund deficits.

Financial Results	1996/1997	1997/1998	1998/1999	1999/2000	2000/2001	2001/2002
Total Revenue	160.5	162.2	165.4	175	198.6	188.3
Total Expenses	161.8	163.2	169.9	181.5	205.3	211.6
Operating Deficit	-1.3	-1	-4.5	-6.5	-6.7	-23.3
Restructuring (Net of Recoveries)	0	1.1	6.1	-2.1	5.9	2.3
Total Deficiency	-1.3	-2.1	-10.6	-8.6	-12.6	-25.6
Working Capital	-0.5	-0.6	-2.9	-10.6	-35.1	-70

Recent Trends in Operating Efficiency
Over the period from 1997/98 to 2000/01, HRSRH productivity declined substantially due to increasing operating expenses without increases in patient activity. The most significant increases have been in the last

two years. The most current figures indicate that HRSRH has expenses approximately 20% more than expected, relative to other Ontario hospitals.

Recent Trends in HRSRH Referral Population Volumes

HRSRH is a major provider of all levels of hospital care for the residents of the Sudbury Municipality and District, and for Manitoulin. For the rest of north eastern Ontario, Sudbury is more significant as a provider of tertiary services. While acute and day surgery volumes have declined marginally from 1997/98 to 2000/01, the percentage of resources dedicated to tertiary care has increased, as did HRSRH's share of total north eastern resident tertiary market. Fewer HRSRH resources for the northeast were dedicated to primary care volumes at the end of the period, since more often residents outside of the Municipality are receiving this care closer to home.

There is no indication that the communities HRSRH serves are underserved with respect to hospital based care. Overall acute and day surgery volumes are similar to what would be expected elsewhere in Ontario given current estimates of demographics and relative referral population needs. In addition, there is no indication that tertiary procedure rates are lower than elsewhere. Those patients that do go south for care are typically more resource intensive so that such travel is likely to be appropriate. On the other hand, it would appear that the communities most dependent on HRSRH for hospital care are often admitted for conditions that are preventable given better access to primary care.

GOVERNANCE

The review of governance and the development of recommendations for strengthened HRSRH board functioning was informed by a survey of existing and previous board members, interviews with the same, and a review of board minutes over the past three years, and other HRSRH documentation. In addition, the conclusions were influenced and informed by the review of medical staff and hospital management, as well as the capital project and interviews with community stakeholders.

The Administrative By-laws stipulate that the Board shall be comprised of 19 voting Directors, 12 of whom shall be elected, and seven of whom shall be ex-officio Directors. In addition, the CEO is a non-voting director.

The consultants conclude that the Board has not effectively carried out its responsibilities. In particular, the Board

- did not unanimously understand their accountability, and as a result, failed to effectively govern the operations of the hospital and the capital redevelopment project.

- failed to scrutinize information presented to it by administration and physicians, generally accepting information and recommendations presented without requesting alternative options or an evaluation of the impact on the hospital's circumstances;
- despite its public statement of accountability to the MoHLTC, taxpayers, as well as its patient population, was nevertheless almost entirely reliant on the MoHLTC to "bail" it out of its financial circumstances; and
- has been intractable about service reductions and consequently has had a difficult time responding to the worsening financial condition of the hospital.

The Board has been through very difficult and trying times. The Board recognizes that serious mistakes have been made and that they have failed to ask the right questions of management. However, the consultants have witnessed an increasing awareness of the part of Board members of their fiduciary responsibilities. They are much more willing to demand information, to ask for options and alternatives, and to ask the tough questions. While this more recent improvement is encouraging, it is yet to be determined whether or not the Board, as currently constituted, will be able to make tough decisions.

While the Board has failed to govern effectively in the past, given recent improvements in Board functioning, the commitment of existing Board members, and the hospital's need for experienced governance, the consultants do not recommend replacing the Board at this time. We recommend that an objective coach be appointed by the MoHLTC to assist the Board in fulfilling its mandate, and to provide assurance to the MoHLTC that HRSRH is successfully implementing the recovery plan. The Coach should:

- work with the current Board to identify the skill sets required on the Board to face current challenges;
- assist in the implementation of the recommendations for improved governance identified in this report, including: Board committee structure, the role of ex-officio directors, educational and orientation requirements, credentialing, overseeing the provision of high quality care at HRSRH and reporting requirements and mechanisms;
- assist the Board in evaluating the key competencies and requirements for both the CEO and the Chief of Staff, and direct the CEO to evaluate the current senior management structure and staff;
- ensure that the Board holds management accountable for managing HRSRH operations and the capital redevelopment project within the envelope of funds committed to the organization; and
- be selected in collaboration with the HRSRH Board, and have strong governance and leadership experience.

The Coach, throughout the implementation of the recovery plan, should provide regular feedback on the effectiveness of the Board, to the Board itself, and to the MoHLTC. The ability to oversee the successful implementation of the recovery plan will serve as a test of the ongoing viability of the Board. In the event that the Coach determines that the Board and management of HRSRH are unable to successfully implement the Recovery Plan, he/she may recommend that the MOHLTC appoint a Supervisor [illegible].

MANAGEMENT

The review of management effectiveness was informed by interviews, review of HRSRH documentation, and interaction with the senior management team in the Steering Committee, Working Groups, and in the departmental reviews that followed clinical and financial benchmarking. The consultants considered management structure, decision making and accountability, external relationships and the capacity to implement change.

HRSRH uses a program management model that is evolving, and should continue to be evaluated and refined to ensure that the programs meet community and patient needs. The dual leadership structure (administrative and medical program directors) strongly supports the integration of clinical and administrative objectives. The model has been well accepted at HRSRH and should be expanded to include all programs.

The Senior Management Team is a relatively newly configured team. The past few years have seen a multiplicity of Chief Financial Officers, and several acting positions within the Senior team. This fact has challenged the ability of the Senior team to effectively manage the organization. With respect to decision making and accountability, the management team:

- has effectively identified issues of concern that require intervention, but has been largely unsuccessful in developing and implementing solutions;
- like the HRSRH Board, has struggled with the challenge of balancing community needs and financial accountability;
- does not function strategically, but rather tends to get involved in making smaller, tactical decisions; and
- has neglected to develop effective management information and processes, while it has been focused on restructuring and capital redevelopment projects.

Recently, an improvement in Senior Management effectiveness has been noted and can be attributed to:

- Appointing the acting CEO to the CEO position prior to this operational review, and her increasingly proactive role during the operational review; and
- The addition of a permanent Chief Financial Officer and experienced Construction Project Director during the course of this Operational Review.

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OPERATIONAL EFFICIENCY AND OPPORTUNITIES

The review of operational efficiency was supported by the financial and clinical working groups, and was informed by:

- A review of the quality and consistency with provincial reporting guidelines of financial and clinical data to be used to support benchmarking analysis;
- Extensive and rigorous peer hospital clinical and financial benchmarking;
- A retrospective and concurrent clinical audit using experienced nurse reviewers using the InterQual ISD-AC™ 2001 Clinical Decision Support Criteria Review System to identify clinical practice and operational issues contributing to non-acute utilization of acute care resources;
- Hospital departmental and program reviews and follow up interviews; and
- Consultation, on a department by department basis, with recognized leaders in innovative practices.

The operational efficiency review dealt with the two dimensions of hospital organization: hospital departments (both clinical departments as well as administration and support) and clinical programs. Retrospective and concurrent utilization reviews and clinical efficiency benchmarking were used to identify opportunities to improve clinical program efficiency. Departmental efficiency benchmarking analysis was used to identify savings opportunities in nursing, diagnostic, therapeutic and administrative and support departments. Only those programs and departments for which the benchmarking analysis showed significant potential savings underwent a more detailed review including interviews with key personnel and further investigative analysis.

A review of the quality of the HRSRH 2000/01 discharge abstract database and MIS database (both used extensively in the benchmarking analysis) was conducted to ensure that the benchmarking results were based on valid and reliable data. Where there were issues identified in the financial data, the hospital was provided with the opportunity and support to allow adjustments to be reflected in the benchmarking analysis. An analysis of the quality of coding of patient charts was also performed, and significant deficiencies in the quality and completeness of chart documentation suggests that HRSRH is under-coding and hence, understating the services it provides relative to other Ontario hospitals. This fact has been considered by the consultants, and was used to moderate expectations regarding clinical utilization opportunities measured in the benchmarking analysis.

Based on the benchmarking analysis, the departmental reviews, and the experiences of other Ontario hospitals, the consultants identified total operational savings of just over $13 million or 6.7% of total net 2000/01 expenses at HRSRH. Clinical program savings (through length of stay reductions and staff mix adjustments) contributed $4 million while departmental savings contributed $9 million. The targeted improvements in clinical utilization should allow the hospital to operate with 506 total inpatient beds, including rehabilitation and complex continuing care. The operational review report details financial and clinical utilization improvement opportunities, and specifies specific strategies and targets for achieving these savings.

Summary of Clinical Program and Departmental Savings

Clinical Program	Total Current Beds	Recommended Bed Reductions	Bed Reduction Savings	Staff Mix Adjustment Savings	Total Savings
Cardiology/Cardiac Thoracic	14	3	$ -	$ 715,000	$ 715,000
Cancer/Hematology and Palliative	47	15	$ 773,625	$ -	$ 773,625
General Surgery	27	0	$ -	$ 455,000	$ 455,000
Nephrology	15	0	$ -	$ -	$ -
Oncology	11	0	$ -	$ -	$ -
Orthopedics	24	5	$ 354,788	$ 329,000	$ [illegible]
Psychiatry	28	28	$ -	$ -	$ -
Trauma	15	0	$ -	$ -	$ -
Urology	12	5	$ 354,788	$ -	$ 354,788
Close Laurentian ICU	4	4	$ 125,000	$ -	$ 125,000
Total Reviewed Program Savings	[illegible]	56	$ [illegible]	$ [illegible]	$ [illegible]
Additional Savings for Non Reviewed Programs					$ [illegible]
Total Program Savings					$ [illegible]

Department	Department Expenses	Total Savings	% of Savings of Benchmark
Bio Medical Engineering	$ 2,[illegible]	$ 160,000	27.7%
Cardiac Cath Lab	$ [illegible]	$ -	0.0%
Central Processing	$ [illegible]	$ 50,000	[illegible]
Clinical Laboratories	$ [illegible]	$ -	0.0%
Diagnostic Imaging	$ [illegible]	$ 1,150,000	
Emergency	$ [illegible]	$ -	0.0%
Food Services	$ [illegible]	$ 1,460,000	[illegible]
Health Records	$ [illegible]	$ [illegible]	[illegible]
Housekeeping	$ [illegible]	$ [illegible]	[illegible]
Information Systems	$ [illegible]	$ [illegible]	[illegible]
Materials Management (incl Supplies)	$ [illegible]	$ [illegible]	[illegible]
Pharmacy	$ [illegible]	$ [illegible]	[illegible]
Registration	$ [illegible]	$ [illegible]	[illegible]
Renal Dialysis	$ [illegible]	$ [illegible]	[illegible]
Respiratory Therapy	$ [illegible]	$ [illegible]	[illegible]
Total Reviewed Department Savings	$ [illegible]	$ [illegible]	[illegible]
Additional Savings for Non Reviewed Departments	$ [illegible]	$ [illegible]	[illegible]
Total Department Savings	$ [illegible]	$ [illegible]	[illegible]

Total HRSRH Savings (Clinical Programs and Departments)	$ [illegible]

The savings identified take into consideration the unique complexities associated with the provision of care in a large, multi-site hospital in northern Ontario. In addition, they are based on the assumption that HRSRH eventually consolidates services on the Laurentian site. Of the $13.1 million of identified savings, approximately $3.2 million are contingent on the consolidation of operations on one site. These savings were informed by the best practices of other Ontario hospitals, and reflect adjustments for issues identified in the quality of clinical documentation used for benchmarking. The consultants are of the view that these opportunities are conservative and realistic. We expect that as HRSRH implements the detailed recommendations of this review with respect to nursing workload measurement, activity based reporting and budgeting processes, as well as effective utilization management practices, the opportunities for further improvements in operational efficiency will be possible.

CAPITAL REDEVELOPMENT

Review of Capital Redevelopment Project

The review of the capital project was supported by the capital working group, and extensive interaction between the consultants, their functional program and costing advisors, and the hospital architects, and cost consultants, as well as a review of relevant documentation including minutes of the Building and Planning Committee, relevant Board minutes, documentation of discussions with the MoHLTC and HRSRH, key reports including historical cost estimates, Minister's approvals, sketch plans, architectural drawings, selected contracts, and more recent cost estimates. In addition, interviews with key contractors, community stakeholders, past and present HRSRH Board Members and relevant past and present MoHLTC and HRSRH staff supported the findings and recommendations. Finally, the review was informed by comparisons of planned, approved and current workload, assessment of bed requirements into the future, analysis of planned, approved and actual build area, as well as an assessment of the cost to complete.

While the review did attempt to broadly identify issues that have led to the current situation, the review was focused on the development and evaluation of options for the successful completion of the capital project in a timely manner consistent with HSRC directions, MoHLTC policy and the expectations of the community and hospital.

Chronology of Events

In April of 1998, the hospital's functional program submission to the MoHLTC had a capital value of $135.28 million. Two months later, a revised capital cost estimate of $131.6 million was subsequently approved by the Minister of Health. The sketch plan report, provided in April 1999 had estimated project costs of $147.5 million. The MoHLTC, with little experience in the construction management approach to the capital redevelopment being sought by hospital, asked the Board to sign a waiver of liability, which it did in February of 2000. The waiver of liability meant that HRSRH was responsible for any additional costs over the MoHLTC contribution. In March of 2000, the MoHLTC approved the construction management approach that was based on a project value of $143.4 million, of which the MoHLTC contribution was $92.14 million.

The HRSRH Board was informed in September of 2000 of a $20 million cost increase so that the September 2000 total cost estimate had risen to $167.88 million. By May 2002, the Operational Review consultants and the hospital's own cost consultants had concluded that the cost to complete the capital redevelopment project had increased to more than $363 million. It should be noted that this figure includes more realistic estimates of costs associated with the capital redevelopment project (decommissioning, commissioning, furniture, equipment and information technology), but were not fully acknowledged in the Minister's approvals.

Outcomes of the Capital Project

The capital redevelopment project, when reviewed by the consultants had the following outcomes:

- The planned total are in gross square feet had increased by 139,400 or 17% from the June 1998 Minister's approval of 774,900, to 914,300;
- The functional area of the future hospital has declined by 7% from the area originally programmed (i.e., from 658,920 cgsf to 614,778 cgsf). The area associated with mechanical and circulation area has increased significantly, from 26.5% to 48.72%;
- The overall functional area per bed is below the expected level in current hospital planning in Ontario, 1,050 cgsf/bed compared to 1,265 to 1,350 cgsf/bed, depending on the hospital type;
- The cost per square foot of construction, renovation and life safety, more than doubled from the 1998 MoHLTC approval, and current Ontario market costs;
- The total project construction budget had already been consumed at the completion of Phase 1, yet a substantial amount of acute care construction and renovation had yet to be commenced, including the emergency department, diagnostic services, and acute inpatient and critical care capacity; and
- The cost to complete the project, including items not part of the initial approval had risen to $363.6 million, so that the un-funded gap was nearly $200 million.

Review of Capital Project Management and Processes

Given the decision to proceed with a construction management approach to the capital redevelopment project, it was imperative that HRSRH dedicate adequate internal resources to overseeing all aspects of the project. This did not occur.

The project has suffered from a lack of oversight and adequate supervision at all levels. HRSRH did not engage an independent cost consultant until late in 2000, and did not have an experienced construction project manager until late 2001. Consequently,

- Errors and inconsistencies in space and cost estimates throughout the project have contributed to confusion and misperception;

- Roles and responsibilities were not clearly defined for each member of the project team;
- Policies and procedures were thin and not consistently followed;
- The Board was not adequately informed of the financial status of the project at each step, including the potential liabilities associated with change orders;
- The Board made decisions regarding the capital project without consideration of the impact on the cost of the project;
- Documentation for tendering provided insufficient detail and resulted in unrealistic tenders being accepted;
- The monitoring of scope and escalation was inadequate; and
- The design team appears to have left the construction manager with the responsibility for tracking all aspects of the project, and the hospital relied too heavily on PCL to complete the project on time and on budget. PCL was rarely challenged on decisions made related to the project. The hospital did not have resources capable of challenging PCL.

The addition of the Construction Project Director has addressed many of these concerns during the course of the Operational Review.

Options for Completing the Capital Redevelopment

The Capital Working Group developed and evaluated a number of options for the timely completion of the capital redevelopment project with a goal to consolidation of services on one site. The most relevant of these options are:

- Option 2: All hospital programs on one site for a total of 506 beds
- Option 4A1: Mental Health and CCC beds excluded from Laurentian site and provided at other sites
    - Option 4A1.1: Temporary use of Memorial site for CCC until dedicated permanent space is available
    - Option 4A1.2: Simultaneous construction of CCC beds at permanent site
- Option 4A2 – CCC beds excluded from Laurentian site and provided at other sites
    - Option 4A2.1: Temporary use of Memorial site for CCC until dedicated permanent space is available
    - Option 4A2.2: Simultaneous construction of CCC beds at permanent site
- Option 4A3 – Acute care services at Memorial and Laurentian sites
    - Option 4A3.1: 80 acute care beds at the Memorial site, and 426 beds in operation at the Laurentian site
    - Option 4A2.2: Option 4A3.1 with consolidation of all services to the Laurentian site by 2012/13

Each of these options were evaluated considering:

- the total projected capital cost of each option using both estimation results (Marshall & Murray's and Helyar's) as well as an estimate of the timing of cash flow requirements;
- the timing of the construction (start and finish) for each option;
- potential construction cost escalations and inflation of hospital operations;
- incremental costs of renovation, building and maintenance associated with providing services at the Memorial site (options 4A1/2/3); and
- delays in achieving operating efficiency savings from single site consolidation (since the options have different completion times).

HRSRH Capital Project	*Phase 1*	*Phase 2*				
		Option 2	*Option 4A1*	*Option 4A2*	*Option 4A3.1*	*Option 4A3.2**
Construction (incl dev chgs)	$116,410,000	$102,221,060	$76,401,298	$76,581,764	$71,707,497	$102,221,060
Mental Health				$6,604,401		$0
Decommissioning	$8,000	$4,099,500	$4,099,500	$4,099,500	$2,625,000	$4,099,500
Furniture, Equip't, IT	$11,140,952	$47,588,500	$46,066,500	$45,988,500	$36,000,000	$47,588,500
Ancllary Costs						$0
- Design Costs	$12,610,310	$6,981,213	$5,690,218	$5,974,242	$4,951,837	$6,981,213
- Functional Program'g	$595,842	$0	$125,000	$125,000	$100,000	$0
- Commissioning	$1,407,668	$2,422,500	$2,422,500	$2,422,500	$1,550,000	$2,422,500
- Project Management	$9,469,149	$4,698,422	$4,437,310	$4,437,310	$6,332,271	$4,698,422
- Project Contingency	$750,000	$5,507,335	$4,497,904	$4,497,904	$3,934,047	$5,507,335
- GST	$1,663,306	$1,755,700	$1,498,203	$1,516,921	$1,272,623	$1,755,700
Total Phase 1 or 2 Cost	*$154,055,227*	*$175,274,229*	*$145,238,432*	*$152,248,041*	*$128,473,274*	*$175,274,229*
CCC Renovation Costs			$ 500,000	$ 500,000		$ -
CCC Construction Costs			$ 23,366,000	$ 23,366,000		$ -
Minimum Total Project Capital Cost		*$329,329,456*	*$ 322,659,659*	*$ 329,669,268*	*$ 282,528,501*	*$ 329,329,456*

*Current costs estimates for the future completion are based on the difference between option 2 estimates and option 4A3 costs.

Only option 4A3.1 offers a significant advantage in terms of the cost of completing phase 2. It should be reminded that the cost estimate for option 4A3.2 (completion of consolidation to one site in ten years time) should be considered a lower bound estimate.

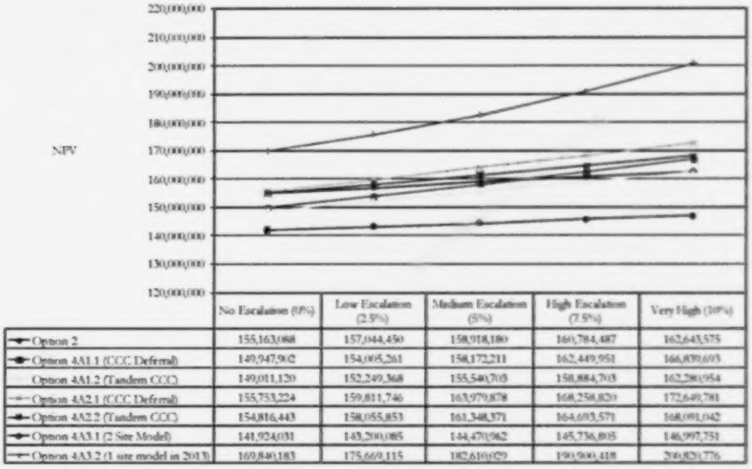
The net present value of each option was evaluated, accounting for construction cost, incremental building operating and building capital expenses, as well as the impact on achieving savings associated with one site consolidation. The net present value was estimated for:

- construction escalation estimates cost estimates varying from 0% to 10% while holding the cost of capital constant at 6.5%, and

- cost of capital assumptions varying from 5% to 10% holding construction cost escalation at 5%.

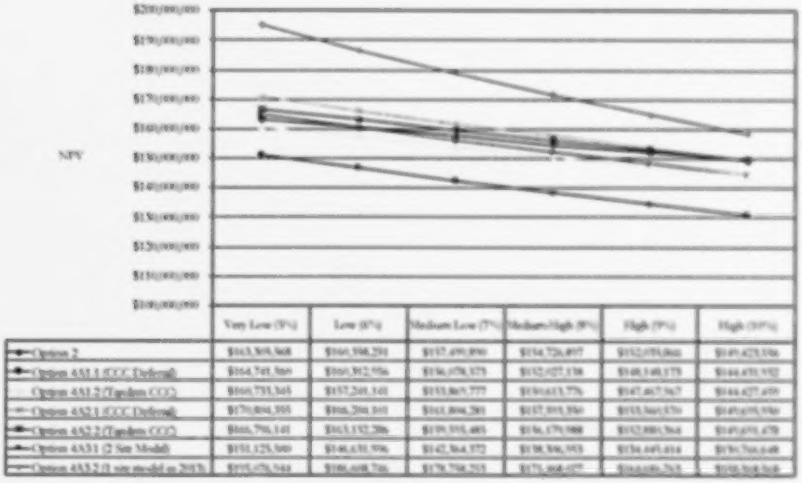
The two-site model in Option 4A31 is the lowest net present value option over all assumptions regarding escalation, and has particular advantage if escalation of hospital construction cost is high. Following Option 4A3.1, options 4A2.2 which assumes tandem construction of CCC dominates all other options. The highest net present value is obtained with Option 4A3.2, which involves the deferral of one site consolidation for ten years. This option is very unattractive if escalation is high. Option 2 is the second highest net present value option if construction cost escalation is 0% per year and the third lowest if escalation is 10% per year. The widest range in net present value occurs if market escalation is high: $60,000,000 between 4A3.1 and 4A3.2.

Net Present Value of Capital Options Versus Assumptions Regarding Construction Escalation



	No Escalation (0%)	Low Escalation (2.5%)	Medium Escalation (5%)	High Escalation (7.5%)	Very High (10%)
Option 2	155,163,088	157,044,450	158,918,180	160,784,487	162,643,575
Option 4A1.1 (CCC Deferral)	149,947,902	154,005,261	158,172,211	162,449,951	166,839,693
Option 4A1.2 (Tandem CCC)	149,011,120	152,249,368	155,540,703	158,884,703	162,280,954
Option 4A2.1 (CCC Deferral)	155,753,224	159,811,746	163,970,878	168,258,820	172,649,781
Option 4A2.2 (Tandem CCC)	154,816,443	158,055,853	161,348,371	164,693,571	168,091,042
Option 4A3.1 (2 Site Model)	141,924,031	143,200,085	144,470,962	145,736,805	146,997,751
Option 4A3.2 (1 site model in 2013)	169,840,183	175,669,115	182,610,029	190,900,418	200,820,776

Net Present Value of Capital Options Versus Assumptions Regarding Cost of Capital



As was the case with the cost escalation sensitivity analysis, Option 4A3.1 is the lowest net present value option across the entire range of assumptions regarding the cost of capital percentages, and option 4A3.2 is the highest cost option. The range in net present value from the lowest to the highest cost option is approximately $28 to $44.

Capital Project Completion

The HSRC directed the consolidation of services on one site. This is also the expectation of the community, the hospital and the medical staff. The advantages of a one-site model include improved staff morale, accessibility and timeliness of services for all patients, continuity of care, and an improved ability to recruit and retain staff. In addition, a one-site model will be more effective in providing the required support for the medical school. Further, the ability of the hospital to raise funds to finance the completion of the capital project may be hampered by anything other than a one-site model.

Given the excessive spending on Phase 1 construction, it is not clear that any of the options considered are financially feasible based on the capacity of the community and the MoHLTC to contribute the required amounts. Alternative financing arrangements will be challenged by the fact that the hospital does not have an operating surplus.

Considering all incremental cash flow requirements over the next decade, option 4A3.1 has smallest capital budget, the smallest net present value, and requires the least community and MoHLTC contribution. However, it does not achieve the directions of the HSRC and will not meet the expectations of the community and the hospital. This option is the most feasible from a financial perspective. However, it will continue to provide HRSRH will operational challenges associated with sub-optimal program and service alignment. In addition, the opportunities to reduce operating expenditures from one site consolidation are lost forever.

It should be clearly stated that option 4A3.1 does not assume an eventual consolidation to one site. The financial analysis shows that this option (4A3.2), while it does allow for an additional decade to raise the necessary funds to complete the project, is the most expensive and least desirable option in the long run. The temptation to support a two-site model for ten years with eventual consolidation onto one site should be actively discouraged. The long run cost to the community and to the MoHLTC of such an option is greater than any other option presented. The two-site model (4A3) or the one-site models (2, 4A1, 4A2) developed during the operational review will better serve all stakeholders.

At this time, there remains doubt that any of the options considered during the Operational Review are affordable from both the perspective of the community contribution, and the MoHLTC share of the project cost. Therefore, it is not possible to recommend a specific option for the timely completion of the capital project. However, it is imperative that:

- The MoHLTC and HRSRH work to quickly determine the budget available for completing the HRSRH capital project, including MoHLTC funding, community share, and other potential sources of financing.
- As part of the recovery planning process currently underway, and assuming that sources of funding have been identified, the MoHLTC and HRSRH should select from Options 2, 4A1, 4A2 and 4A3.1. Any plan to complete the project in two phases as in option 4A3.2, should not be considered.
- As long as a detailed financing plan for the completion of the capital project is not available, HRSRH and MoHLTC should base the recovery plan on the continued operation of three sites.

THE HRSRH RECOVERY PLAN

The consultants would like to re-iterate their appreciation for the dedication and hard work of the Steering Committee Independent Chair, the MoHLTC and the HRSRH staff. However, the most important and difficult work remains the development and implementation of the HRSRH recovery plan. The MoHLTC and

HRSRH are currently working together to develop a detailed recovery plan using the findings and recommendations of the Operational Review. The goals of the recovery plan must be to:

- Balance the operating budget of HRSRH;
- Improve the working capital position of HRSRH; and
- Complete the capital redevelopment project.

The consultants are confident that all of the operating improvements and savings targets not contingent on one site consolidation are realistic and achievable within a three year time frame. Of the $13.1 million in total operating savings identified, approximately $3.2 million in savings are contingent on the consolidation of services on one site. Given that the operating deficit for 2001/02 was $25.6 million, it is clear that a balanced budget will require some combination of increased MoHLTC funding or HRSRH service reductions. The balance between service reductions, operating improvements and funding adjustments will be determined in the recovery planning process. The financial health of HRSRH is critically dependent upon the MoHLTC and HRSRH working together to clearly establish funding levels and service expectations.

At this time, the budget available to support the completion of the capital project is unknown. Given the extent to which Phase 1 cost exceeded the planned budget, the expectations of the MoHLTC, HRSRH and the community all exceed the budget committed for the completion of the project. Until new sources of capital funding are determined, HRSRH will continue to operate on three sites. The selection of an option for the completion of the capital project must await budget clarity, but should be limited to the specific options recommended in this report. In particular, the option of moving to a one site model in ten years (option 6.5.5.2), while it allows for more time to raise capital funding and meets everyone's expectations in the long run, has significantly higher total project costs, incremental operating and deferred operating savings, and net present value. Rigorous analysis suggests that the only efficient way to consolidate to one site is to complete the project in the next phase of construction. If funding is not secured for the consolidation in the next phase of construction (as in Options 2, 6.5.1 and 6.5.2), then the project should be concluded by consolidating to two sites as soon as is possible (as in option 6.5.5.1).

2. INTRODUCTION

CONTEXT

The Hôpital Régional de Sudbury Regional Hospital (HRSRH) was established in June 1997 when the legacy hospitals – Laurentian Hospital, Memorial Hospital and Sudbury General Hospital – ceased to exist and a new hospital was created. HRSRH serves a multi-cultural population that includes a sizeable aboriginal community. Sudbury's region is designated under the French Language Services Act and, as such, HRSRH provides services in both official languages. HRSRH's referral population is below the provincial average in socio-economic status and above the provincial average in morbidity and mortality. As a modified "C" hospital with tertiary referral programs, HRSRH provides a wide range of acute inpatient, rehabilitation, chronic care, outpatient and community care services. Some of the tertiary care programs currently offered include a regional trauma centre, a regional nephrology program, a children's treatment centre, a full tertiary care cardiology and cardiac surgery unit, regional rehabilitation services, a regional oncology program and genetics program. HRSRH is working closely as host hospital to the Northeastern Ontario Regional Cancer Centre and partnering with other Northeastern Ontario hospitals, the North Eastern Mental Health Centre, Sisters of St. Joseph of Sault Ste. Marie and the Community Care Access Centre (CCAC).

On December 16, 1996, the Health Services Restructuring Commission (HSRC) issued its reports and directions for restructuring hospital services in Sudbury. In response to these directions, the three local acute care hospitals (Laurentian, Memorial and Sudbury General) ceased to exist on June 1997 and HRSRH was created as a single new entity. The HSRC's Rural and Northern Hospital Networks Report for the Sudbury area issued in March 1999 defined HRSRH as the principal tertiary referral hospital for a network that includes hospitals in Espanola, Little Current and Mindemoya, Blind River and Elliot Lake.

The HSRC's directions called for the renovation and expansion of the Laurentian site to provide all acute inpatient, rehabilitation and chronic care services. The latest budget estimates for the capital project are up considerably from the original HSRC estimate of $86.6 million. The hospital has been operating in a deficit position every year since the amalgamation in 1997. The deficit for the 2001/2002 fiscal year stands at $25.6 million. The working capital deficit for 2001/2002 is $70.0 million, up from $[illegible] million in 2000/2001 as indicated in HRSRH Financial Audited Statements.

While total equivalent weighted cases (reflecting acute and chronic inpatient and day surgery activity) decreased by 2.2% between 1998/1999 and 1999/2000, the corresponding expenses increased by 6.5% leading to an 8.9% increase in actual cost per equivalent weighted case. Expenses continued to rise in 2000/2001 and 2001/2002 while volumes remained constant.

Given these events and the HRSRH's financial circumstances, in September 2002 the HRSRH Board of Directors requested an operational review by the MoHLTC. The services of THiNC Ltd, Canadian Healthcare Management Inc. and external advisors were retained by the MoHLTC to conduct an operational review of the HRSRH.

A Steering Committee was established with representation from HRSRH, MoHLTC, THiNC Ltd and Canadian Healthcare Management Inc. The Steering Committee met on a regular basis throughout the Operational Review to review progress, findings and recommendations.

OBJECTIVES

The principal objective of the operational review was to:

- conduct an objective analysis of issues facing HRSRH;
- review governance, management and medical staff structures, decision making and communication processes at HRSRH;
- identify factors impacting on HRSRH's financial situation and develop a recovery plan and an implementation strategy that would allow HRSRH to carry out its service mandate effectively under a balanced operating budget;
- identify strategies to improve clinical utilization;
- identify the impact of restructuring and the operation of multi-site locations on financial and clinical objectives; and
- review capital project management and identify options to complete the capital project within a realistic time frame.

SCOPE

To address its objectives, the operational review examined the following:

- **Governance and Management Effectiveness** [illegible]
- **Operational Efficiency** [illegible]
- **Financial Management Practices** [illegible]
- **Clinical Utilization Efficiency** [illegible]
- **Capital Expansion Project Planning, Management, and Financing Effectiveness** [illegible]

APPROACH

[illegible]

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- reviewing initial findings/observations;
- reviewing options for consideration and apply agreed upon criteria to evaluate options;
- advising the consultants as to activities that should be completed in order to achieve successful outcomes to the operational review;
- providing support to the review process;
- advising the consultants as to unique issues which they believe have and/or will continue to influence the capital project;
- reviewing any relevant documentation prepared for the Steering Committee;
- providing advice to the consultants regarding factors that require further analysis/interpretation; and
- reviewing the draft, final report and recommendations and provide input.

Appendix I lists the membership for the Steering Committee and the three Working Groups.

Phase 2 was the longest and most intensive stage. Its objective was two-fold: collect and analyze the relevant data and information, and identify key issues including a preliminary list of opportunities. These objectives were met through interviews with key HRSRH, MoHLTC and external stakeholders, as appropriate, and a thorough review of available documentation and data.

In order to complete Phase 2 within the timeframes provided, the following data was required:

- 2000/2001 trial balances, OCDMs and supplementary tables for HRSRH and the cohort;
- 1997/1998 – 2000/2001 CIHI data regrouped to PIs 2000;
- 1997/1998 – 2000/2001 actual and expected CPWC data; and
- Program Cluster methodology for PIs 2000.

The final deliverable of Phase 2 was the presentation of findings to the Steering Committee. Prior to these presentations the consultants had collaborated closely with both Working Groups to ensure that the factors unique to HRSRH had been fully integrated into the analyses. Given the extent and diversity of the subject matter that was to be covered during this stage, the following approach was used:

- The findings of Phase 2 were presented over several Steering Committee meetings as follows:

    - preliminary findings on governance and decision making;
    - preliminary findings from the financial analysis, both operating and capital; and
    - preliminary findings from the clinical and financial benchmarking analysis and review of hospital operations.

Phase 3 involved the synthesis of the findings from Phase 2. This included integrating the data analysis, interviews and reviews of documentation. The findings of Phase 3 were also presented over many Steering Committee meetings as follows:

- findings from the Clinical Audit;
- detailed departmental/programmatic review findings;
- medical staff issues;
- capital project; and
- overall findings (addressing the scope of the recovery plan).

Phase 4 involved the development and presentation of the draft report documenting the process, findings and recommendations. This phase also provided an opportunity to discuss the preliminary implementation and recovery plans.

Following a review of the draft report by the MoHLTC and HRSRH, Phase 5 included the refinement and presentation of the final report, and the development, in collaboration with the hospital, of the implementation and recovery plans.

The consultants would like to acknowledge the dedication and hard work of the Steering Committee, Working Groups, MoHLTC and HRSRH throughout the operational review.

3. TRENDS IN OPERATING EFFICIENCY AND REFERRAL POPULATION VOLUMES

HRSRH TRENDS IN OPERATIONAL EFFICIENCY

TRENDS IN EXPENSES, VOLUMES AND AVERAGE UNIT COST

Exhibit 1 shows the trends in total expenses, volumes and unit cost for HRSRH by patient type from 1997/98 to 2000/01. It should be noted that the acute weighted cases in Exhibit 1 were derived from a discharge abstract with a constant grouper (CMG 2000) and RIW calibration methodology (RIW 2000) so that year over year comparisons would not be influenced by changes in CIHI RIW methodology. Consequently, the weighted case figures and cost per weighted case figures in Exhibit 1 will not match the OCDM figures used elsewhere for each fiscal year.

Exhibit 1: HRSRH Expenses and Volumes by Patient Activity Type (1997/98 to 2000/01)[1]

Activity Type	1997/98	1998/99	1999/2000	2000/01	% Change 97/98 to 00/01	% Change 99/00 to 00/01
Acute Weighted Cases	38,742	39,238	37,730	37,438	-3.3%	-0.7%
Acute Expenses	$99,769,072	$108,210,218	$109,399,045	$128,946,001	29.2%	17.9%
Cost per Weighted Case	$2,575	$2,758	[illegible]	$3,442	33.7%	18.7%
Chronic Care Weighted Days		18,780	20,091	19,685	4.8%	-2.0%
Chronic Care Expenses		$5,521,522	$5,531,798	$5,883,991	6.6%	6.4%
Cost per Chronic Care Weighted Day		$294	$275	$299	1.7%	8.6%
Rehabilitation Days	6,308	6,722	6,424	6,337	0.5%	-1.4%
Rehabilitation Expenses	$2,897,400	$3,680,225	$3,337,319	$3,582,525	23.6%	7.3%
Cost per Rehab Day	$459	$549	$520	$565	23.1%	8.8%
Emergency Visits (Total)	80,920	75,196	63,571	60,424	-25.3%	-5.0%
Emergency Expenses	$5,392,342	$5,101,720	$5,099,646	$5,174,752	-4.0%	1.5%
Cost per ER Visit	$67	$68	$79	$86	28.5%	8.9%
Total Ambulatory Care Visits	207,676	313,720	206,801	209,792	1.0%	1.4%
Ambulatory Care Expenses	$17,505,370	$17,181,415	$21,140,816	$23,007,304	31.4%	8.8%
Cost per Amb Care Visit	$84	$55	$102	$110	30.1%	7.5%

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[1] Source: Acute Weighted Cases – Discharge Abstract Database; Expenses – OCDM; Chronic Care Weighted Days – Provincial RUG-III Database; Rehabilitation Days, Emergency Visits, Ambulatory Care Visits – MIS.

HRSRH expenses have increased steadily for acute and day surgery, rehabilitation, chronic care, and for outpatient services, and have remained relatively stable for emergency services. The most substantial increases during the period were for acute & day surgery (29.2% increase), rehabilitation (23.6% increase) and for outpatient services (31.4%). The most recent year saw a one-year increase of 17.9% in acute & day surgery expenses.

The increases in HRSRH expenses were not met with similar increases in patient volumes. For example the 29.2% increase in acute & day surgery expenses was accompanied by a 3.3% decline in total weighted cases, the 23.6% increase in rehabilitation expenses was accompanied by a 0.5% increase in rehabilitation days, and the 31.4% increase in outpatient expenses was accompanied by a 1.0% increase in ambulatory visits.

Increasing costs with relatively flat or declining volumes have driven unit costs for acute & day surgery, rehabilitation and ambulatory care substantially higher over the period:

- the average cost per weighted case increased 33.7%;
- the average cost per rehabilitation day increased 23.1%; and
- the average cost per ambulatory care visit increased by 30.1%.

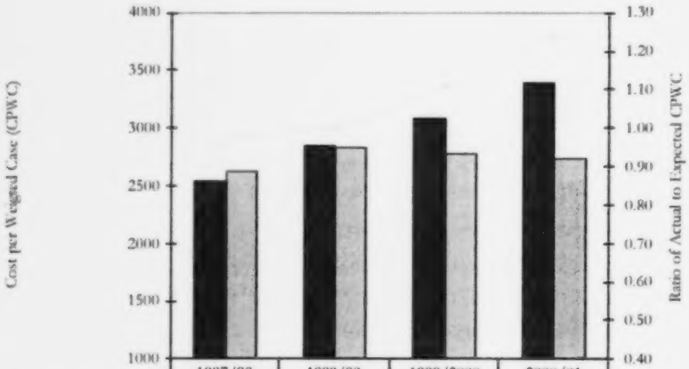
Emergency department average cost per visit has also increased by 28.5%, though the driver has been steadily declining emergency department visits with relatively stable expenditures. These high level trends indicate that HRSRH has not been successful in adjusting resources to meet patient workload requirements.

TRENDS IN ACTUAL AND EXPECTED COST PER WEIGHTED CASE

Hospital Cost per Weighted Case (CPWC) is the most commonly used indicator of an Ontario hospital's overall operational efficiency. The CPWC encompasses acute inpatient and day surgery activity, and, as of 1999/2000, chronic care activity. It is calculated as the ratio of total expenses for the included patient activity types (acute and chronic) to total equivalent weighted cases (the sum of relative resource weights derived from the acute and chronic care abstract data). In addition to being important as an indicator of operational efficiency, CPWC is used by the MoHLTC to assist in the distribution of additional operating funding. Each hospital's actual CPWC is compared with its Expected Cost per Weighted Case (ECPWC) to determine a hospital's relative need for additional funding. The ECPWC, calibrated yearly by the MoHLTC, is determined from comparisons with other hospitals in Ontario with similar levels of teaching intensity, tertiary role, size and isolation. Relatively more additional funding is provided for hospitals with CPWC below ECPWC, and relatively less additional funding is made available for hospitals whose CPWC is above ECPWC. Year over year changes in expected cost per weighted case are influenced by changes in the efficiency of similar hospitals, changes in the RIW calibration methodology, and changes in the calibrated adjustments for each of the factors in the model.

Exhibit 2 shows that actual cost per weighted case for 1997/98 was $2,544, roughly 3% below the expected cost per weighted case in that year. While general increases in hospital operating expenses across Ontario have driven the hospital's expected cost per weighted case up to $2,731 for 2000/01, HRSRH's 2000/01 CPWC is $3,394, or 24% higher than expected. This suggests that HRSRH has become substantially less efficient than other Ontario hospitals during the period and that HRSRH is not well positioned to receive additional operating funding based on efficiency.

Exhibit 2: HRSRH Actual and Expected Cost per Weighted Case (1997/98 to 2000/01)[2]



	1997/98	1998/99	1999/2000	2000/01
■ Actual CPWC	2544	2842	3085	3394
☐ Expected CPWC	2620	2835	2775	2731
Ratio	0.970992366	1.002469136	1.111711712	1.242768217

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[2] Source – OCDM & JPPC Funding Reports

HRSRH REFERRAL POPULATION SERVICE VOLUMES

COMMUNITIES SERVED BY HRSRH AND MARKET SHARE TRENDS

Exhibit 3 shows the trends in weighted cases and market share for HRSRH's most important referral populations in north-eastern Ontario. These communities collectively account for approximately 90% of HRSRH's acute & day surgery activity. The market share figure is calculated by dividing HRSRH's total weighted cases for residents of a community by the total weighted cases for all hospitals for residents of the same community.

Exhibit 3: Acute & Day Surgery Market Share Analysis for HRSRH

HRSRH	Patient County	97/98	98/99	99/00	00/01
HRSRH Weighted Cases	ALGOMA	1,982	2,180	2,106	2,189
	COCHRANE	1,846	1,757	1,831	1,806
	MANITOULIN	1,240	1,170	1,259	1,245
	NIPPISING	1,428	1,541	1,657	1,667
	PARRY SOUND	822	835	672	735
	SUDBURY M	27,922	27,977	26,530	26,045
	SUDBURY D	2,457	2,464	2,392	2,463
	THUNDER BAY	34	42	34	67
	TIMISKAMING	1,015	1,081	1,001	1,148
HRSRH Market Share	ALGOMA	7.2%	7.9%	7.6%	8.0%
	COCHRANE	9.6%	9.2%	9.2%	9.4%
	MANITOULIN	38.1%	36.0%	38.8%	41.0%
	NIPPISING	9.1%	9.4%	9.7%	9.6%
	PARRY SOUND	10.3%	10.9%	8.8%	9.4%
	SUDBURY M	93.2%	93.1%	92.9%	92.5%
	SUDBURY D	50.3%	47.9%	47.9%	47.5%
	THUNDER BAY	0.1%	0.1%	0.1%	0.2%
	TIMISKAMING	12.0%	12.8%	11.2%	13.5%

Over the period from 1997/98 through 2000/01, HRSRH maintained a market share of approximately 93% for residents of Sudbury Municipality, 47% for Sudbury District, and up to 41% for Manitoulin. These three communities are most dependent on HRSRH for service, though only residents of the Municipality account for a significant portion of HRSRH's overall acute & day surgery resources. HRSRH's market share for all Northeastern Ontario referral populations has remained fairly stable over the period. There have been small declines in market share for Parry Sound and small increases for Algoma, Manitoulin, Nippising and Timiskaming. Exhibits 4-6 show HRSRH market share trends for primary, secondary and tertiary levels of acute & day surgery care respectively. The primary level of care trend suggests that HRSRH is a sole provider of primary hospital care for residents of Sudbury Municipality where market share is approximately 97%. All other communities receive the majority of their primary acute & day surgery care from other hospitals closer to home. This is increasingly the case, as patients have tended to receive their care closer to home so that HRSRH primary market share has declined over the period for all communities outside of the Sudbury Municipality.

HRSRH's tertiary market share has increased for all northern counties with the exception of Sudbury Municipality & District, and is currently greater than 25% for all northern counties excluding Thunder Bay. This reflects the tertiary role of HRSRH for the region.

Exhibit 4: Primary Acute & Day Surgery Market Share Analysis for HRSRH

HRSRH	Patient County	97/98	98/99	99/00	00/01
HRSRH Weighted Cases	ALGOMA	150	193	187	145
	COCHRANE	123	111	142	113
	MANITOULIN	342	281	283	286
	NIPPISING	132	159	145	102
	PARRY SOUND	48	64	63	37
	SUDBURY M	10,283	10,615	10,045	9,650
	SUDBURY D	757	760	720	649
	THUNDER BAY	8	9	6	18
	TIMISKAMING	94	104	87	89
HRSRH Market Share	ALGOMA	1.6%	2.1%	1.9%	1.5%
	COCHRANE	1.6%	1.4%	1.8%	1.5%
	MANITOULIN	22.8%	18.6%	20.2%	20.3%
	NIPPISING	2.1%	2.3%	2.1%	1.5%
	PARRY SOUND	1.7%	2.1%	2.1%	1.2%
	SUDBURY M	96.8%	97.0%	96.9%	97.2%
	SUDBURY D	42.5%	43.1%	38.4%	35.8%
	THUNDER BAY	0.1%	0.1%	0.0%	0.2%
	TIMISKAMING	3.0%	3.4%	2.6%	2.6%

Exhibit 5: Secondary Acute & Day Surgery Market Share Analysis for HRSRH

HRSRH	Patient County	97/98	98/99	99/00	00/01
HRSRH Weighted Cases	ALGOMA	466	562	527	500
	COCHRANE	645	550	527	576
	MANITOULIN	524	533	517	456
	NIPPISING	472	473	521	475
	PARRY SOUND	259	242	178	207
	SUDBURY M	11,365	11,157	10,096	10,046
	SUDBURY D	979	1,035	944	981
	THUNDER BAY	10	9	13	22
	TIMISKAMING	297	335	331	329
HRSRH Market Share	ALGOMA	3.8%	4.5%	4.3%	4.3%
	COCHRANE	7.8%	6.9%	6.1%	7.1%
	MANITOULIN	42.2%	43.5%	42.8%	44.1%
	NIPPISING	7.8%	7.3%	8.0%	7.2%
	PARRY SOUND	8.2%	8.2%	5.7%	6.3%
	SUDBURY M	95.1%	95.0%	94.1%	93.1%
	SUDBURY D	48.0%	48.0%	46.1%	46.3%
	THUNDER BAY	0.1%	0.1%	0.1%	0.2%
	TIMISKAMING	7.9%	8.7%	8.2%	9.2%

Exhibit 6: Tertiary Acute & Day Surgery Market Share Analysis for HRSRH

HRSRH	Patient County	97/98	98/99	99/00	00/01
HRSRH Weighted Cases	ALGOMA	1,366	1,425	1,393	1,543
	COCHRANE	1,078	1,097	1,161	1,117
	MANITOULIN	375	357	460	503
	NIPPISING	825	909	991	1,090
	PARRY SOUND	515	530	432	492
	SUDBURY M	6,273	6,205	6,390	6,348
	SUDBURY D	721	669	729	833
	THUNDER BAY	17	23	15	27
	TIMISKAMING	624	643	582	730
HRSRH Market Share	ALGOMA	21.6%	23.7%	25.4%	25.5%
	COCHRANE	31.1%	33.0%	33.6%	33.5%
	MANITOULIN	72.9%	68.8%	72.2%	84.5%
	NIPPISING	25.7%	28.6%	27.3%	29.3%
	PARRY SOUND	26.0%	30.8%	29.3%	32.2%
	SUDBURY M	84.8%	84.2%	85.4%	85.4%
	SUDBURY D	68.0%	54.5%	67.8%	66.4%
	THUNDER BAY	0.2%	0.3%	0.2%	0.4%
	TIMISKAMING	40.8%	41.0%	37.7%	48.7%

More detailed programmatic analysis (See Appendix II) indicates that, for all of the significant tertiary programs clusters, 75% of residents receive their tertiary care in the north. The 25% or fewer of residents that travel south for tertiary services often have significantly higher average resource intensity than residents receiving their tertiary care in the north.

ACTUAL AND EXPECTED DAY SURGERY VOLUMES FOR HRSRH

The Joint Policy and Planning Committee (JPPC) Volumes formula estimates an expected volume of weighted cases for each hospital based an analysis of referral population demographics. Relative needs indicators include mortality, socio-economic status, aboriginal population, fertility rates, the incidence of low birth weight newborns and population density. The model estimates an expected number of weighted cases for each community based on a correlation of historical per-capita volumes with these relative needs indicators for each Ontario community. The expected number of weighted cases for a hospital is obtained by summing the expected weighted cases for each community weighted by that hospital's market share. Since the model is calibrated using historical data, it is not intended to predict absolute requirements. The model does estimate an equitable volume of weighted cases given the relative needs of the communities served. The most recently available data for this model is based on 2000/01 clinical data and uses 1996 Census based estimates of current population demographics. From the most recent census in 2001, it is currently known that there have been population declines for many northern communities served by HRSRH, but final estimates are not yet available. Therefore, the model probably over-estimates HRSRH expected volumes to some extent.

The Volumes model for 2000/01 data estimates 38,511 Ontario resident (off-reserve) weighted cases for HRSRH as compared to an actual figure of 36,937, 4.3% below the expected figure. Therefore, HRSRH's referral population volumes are close to what would be expected in the Ontario context. Overall, hospital resource consumption for HRSRH's referral populations appear equitable given the relative needs of the communities served. A more confident assessment of HRSRH acute and day surgery expected volumes would be possible by the fall of 2002 using 2001/2002 provincial clinical data and the most current census estimates of Ontario's population.

SMALL AREA RATE VARIATION ANALYSIS FOR SELECTED PROCEDURES

To investigate potential issues in access to tertiary procedures, we studied the population rates of selected procedures for the counties most dependent on HRSRH: Sudbury District and Municipality and Manitoulin. This analysis uses a logistic regression model to estimate the per-capita odds of a discharge for each selected procedure controlling for population demographics. The odds ratios were estimated for the period 97/98-00/01 and for the most recent year separately.

Exhibit 7 gives the 95% confidence intervals on the odds ratios for each of the selected diseases and procedures. For Sudbury, Sudbury District and Manitoulin, the odds of a resident receiving one of these selected procedures is above the provincial odds, and sometimes double the provincial odds, controlling for age & sex, for most procedures. This analysis does not indicate that these populations are under-serviced for these programs. No inference that these populations are over-serviced is being implied since the underlying burden of disease has not been considered.

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AMBULATORY CARE SENSITIVE CONDITIONS

Ambulatory care sensitive conditions are hospital discharge diagnosis groupings that occur with greater odds for populations with poor access to primary care. High rates of ambulatory care sensitive conditions are useful flags to assess the quality of care to populations and not intended a measure of hospital performance. Generally, it is found that higher rates of these conditions are found in areas that are more rural, have lower socio-economic markers and with decreased access to primary care. These markers are correlated. Causation has not been established.

For the communities most dependent on HRSRH, the odds ratios for each Ambulatory Care Sensitive Condition[1] were estimated for 1997/98-2000/01 and for the most recent year separately (Exhibit 7). The conditions considered included:

- Asthma
- Angina
- Acute complications of Diabetes
- Chronic complications of Diabetes
- Gastrointestinal Ulcer
- Malignant Hypertension
- Congestive Heart Failure
- Otitis Media
- Pelvic Inflammatory disease
- Pneumonia
- Cellulitis
- Admissions for Immunization-preventable infections

The analysis (see Exhibit 7) suggests that the Sudbury Region and District, and the Manitoulin, the odds of an ambulatory care sensitive condition are higher than in the rest of the province. The odds are more than [illegible] times the Ontario rate in Manitoulin, [illegible] higher for Sudbury District and [illegible] higher for Sudbury Municipality. This suggests that HRSRH serves a community that could benefit from better ambulatory care in the community.

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[1] The conditions considered were consistent with Brown AD, Goldacre MJ, Hicks N et al. Hospitalization for ambulatory care sensitive conditions: A method for comparing access and quality studies using routinely collected data. Can J Pub Health 2001; 92: 155-9.

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4. GOVERNANCE REVIEW

INTRODUCTION

An increasingly significant operational deficit incurred by HRSRH and similarly considerable cost overruns incurred with respect to its capital project, necessitated a review of HRSRH's governance. The objective of this review was to evaluate the performance of the Board of Directors in light of the events that occasioned the review.

Recent operational reviews undertaken under somewhat similar circumstances – for example, Hamilton Health Sciences Corporation and The Ottawa Hospital – have resulted in the removal of the entire board of directors. Of course, a hospital board must be held ultimately responsible for the hospital's financial circumstances. Its role is to govern the corporation, and in carrying out this role, the board has the following specific responsibilities:

- Defining and maintaining the purposes of the hospital, including its goals and objectives with respect to such matters as the hospital's mission, quality of patient treatment and care, relations with professional and other staff, the community and the province, reporting relationships, public access and accountability;
- Defining and maintaining the principles of the hospital, including the values, culture and ethical environment, and of its relationships to its patients, to the community or communities it serves and to the other providers and stakeholders in the health services system;
- Defining and ensuring the long-term future of the hospital, including its social contract and fiscal integrity;
- Ensuring and monitoring the effective management and financial health of the hospital; and
- Ensuring and monitoring the quality of services and continuing improvement of quality in all aspects of hospital operations. (The Steering Committee, Public Hospitals Act Review. *Into the 21st Century: Ontario Public Hospitals*. Toronto: Ontario Ministry of Health, 1992, p. 66.)

To this list, we also add and emphasize the following critical governance responsibility:

- Ensuring there are systems that effectively monitor and manage the risks to the corporation with a view to the long-term viability of the corporation. (The Toronto Stock Exchange Committee on Corporate Governance in Canada, *Where Were the Directors?*

> *Guidelines for Improved Corporate Governance in Canada.* Toronto: Toronto Stock Exchange, 1994 (widely known as the "Dey Report"), p. 18.)

The HRSRH Board failed to adequately identify the financial risks that were facing the hospital and to implement systems to effectively monitor and manage these risks.

In the current health care climate, in which demand for health care services is seemingly unlimited and there is great competition for available financial and human resources to meet those demands, any hospital board is faced with competing governance responsibilities: it must accept its responsibility to carry out its mission and provide patient care to its community; it is also required to maintain the financial health and long term viability of the hospital corporation. The HRSRH Board has had to face the most difficult task of balancing its responsibilities to its various stakeholders – the community, the MoHLTC, its employees, its physicians and other health care providers.

CONTEXT

BACKGROUND – FORMATION OF HRSRH

The HSRC delivered its directions in 1996 for restructuring hospital services in Sudbury. In response to these directions, the HRSRH was established in June 1997 through the merger of the three local acute care hospitals (Laurentian Hospital, Sudbury Memorial Hospital and Sudbury General Hospital). The rationale for the merger was first to gain financial efficiencies through streamlining, and second, to reinvest expected savings in the new organization thereby contributing to improved access to patient-centred care.

A governing Board of Directors comprised of 19 members was elected from members of the former legacy hospitals and the community at large. This included a Director from each of the Boards of Directors of the Laurentian Hospital, Sudbury Memorial Hospital and Sudbury General Hospital. These Directors held office for a two year term. A second Director from each of the same Boards held office for a three-year term. All six Directors were ineligible for re-election for a consecutive term.

Six additional Directors were selected from the Sudbury region and Northeastern Ontario who were not members of the Boards of the three legacy hospitals. Their terms were a two-year term for one Director, a three year term for another Director, and a four year term for four Directors. These Directors were eligible for re-election for two further consecutive three year terms.

Membership of the Board included seven ex-officio Directors listed below:

- the President of the Medical Staff Association;
- the Vice President of the Medical Staff Association;
- the Chief of Staff;
- a representative of the Sisters of St. Joseph of Sault Ste. Marie;
- a representative of the City of Greater Sudbury chosen by City Councillors, from among themselves;
- a representative of the HRSRH Foundation, chosen from among themselves; and
- a representative of the hospital Volunteer Association, chosen from among themselves.

After the election of the first Board of Directors, members were elected at annual meetings for three-year terms, as required, to fill the expired positions. Each Director was eligible for re-election for two further three-year terms only, so that after serving three consecutive terms, a Director would stand down for a period of at least one year before being eligible to stand for re-election.

The Board retained a new President and CEO, who in turn established a new executive leadership team, comprised of former executives and external recruitments. Concurrently, the Board directed the formulation of a new vision for the HRSRH and approved a capital expansion to move all three legacy hospitals onto a single campus at the site of the former Laurentian Hospital.

During a HRSRH Board Retreat held in November 2000, the Board discussed the future role of the hospital and how they should govern the organization. The Board defined its role and responsibilities in terms of three core directional themes: resources, defining role, and quality care. Establishing the role of an organization, ensuring correct alignment of resources, and monitoring quality indicators were identified as the core themes and responsibilities of effective board governance.

CURRENT BOARD COMPOSITION AND STRUCTURE

The Administrative By-laws stipulate that the Board shall be comprised of 19 voting Directors, 12 of whom shall be elected by the Members in rotation at annual meetings of the Corporation and seven of whom shall be ex-officio Directors. The By-laws also state that to reflect the bilingual nature of the region and Northeastern Ontario, the elected membership of the Board must include one-third representation from the French-speaking community.

There are 20 members on the existing Board, including the CEO as a non-voting Director (essentially a permanently invited guest to the Board). The selection process begins with the Nominating Committee of the Board of Directors identifying potential candidates. Nominations from voting members of the Corporation are accepted up to 30 days in advance of the annual meeting. Established criteria for the selection of candidates must be reflective of the linguistic, cultural, religious, gender, and ethnic characteristics of Northeastern Ontario.

The By-laws provide that the Board is accountable to Members of the Corporation, the MoHLTC and to the community at large. Responsibilities include ensuring provision of efficient, quality service; education and research; and effective management of operations and human and financial resources. The Board must regularly evaluate its own performance in relation to its responsibilities.

There are 10 standing committees of the Board established under its By-laws, as listed below:

- Executive Committee;
- Finance and Audit Committee;
- Strategic and Capital Planning Committee (of which the Building & Planning Committee is a subcommittee);
- Research and Bioethics Committee;
- French Language Services Advisory Committee;
- Human Resources Committee;
- Children's Treatment Centre;
- Fiscal Advisory Committee;
- Nominating Committee; and
- Quality Assurance and Risk Management Committee.

It is noteworthy that the Quality Assurance and Risk Management Committee were dormant during the entire three-year period of our documentary review (1999 through 2001, inclusive).

Where there is a vacancy on a Board committee, members can express an interest to sit on any of these committees. The Board is required, pursuant to the By-laws, to encourage the appointment to standing and special committees of Members who are not on the Board of Directors and to ensure that committees reflect the community and a breadth of perspectives.

EXTENUATING CIRCUMSTANCES

To some extent, the circumstances that led to this operational review speak for themselves. The review did find gaps in the Board meeting its responsibilities. Some of these gaps included:

- Failure by the Board to scrutinize the information presented to it by administration and the physicians. Information presented to the Board was generally accepted at face value without much further questioning.
- The recommendations of administration and the physicians were also accepted by the Board without alternative options being requested and their impact on the hospital's circumstances evaluated.
- Benchmarking information, which would have allowed the Board to understand how its hospital was faring against other similarly situated hospitals in Ontario, was not provided to the Board, nor was it actively sought by the Board.
- Although the Board publicly stated its accountability to the MoHLTC and the taxpayer (as well as its accountability to its patient population), the Board was nevertheless almost entirely reliant on the MoHLTC to "bail" it out of its financial circumstances. One example of its inability to accept responsibility for the hard decisions that had to be made at the Board level occurred at a June 2000 Board meeting, at which the Board approved a $10 million deficit operational budget. At that meeting, the Board required that correspondence to the MoHLTC "clearly [identify] that if the hospital is requested to make service reductions to balance its budget, *the Board would expect the MOH to decide what services would be withdrawn*". This statement reflects a lack of understanding of the Board's governance responsibilities. The Board was also intractable about service reductions and consequently had a difficult time responding to the increasing level of debt being assumed by the hospital.

However, in the consultants' view, there were a number of extenuating circumstances that compounded the Board's significant challenges:

- As mentioned earlier, HRSRH was the result of the HSRC-directed amalgamation of three local acute care hospitals. One cannot underestimate the challenge of merging three cultures, three staffs, three sites, three systems, three sets of data, and three boards, particularly on a compulsory basis. An additional challenge was the relationship created by the HSRC between HRSRH and the Sisters of St. Joseph's for the management of St. Joseph's Health Centre. This added denominational sensitivities and a denominational stakeholder into the governance and operational mix.
- Since the amalgamation, HRSRH has had two CEOs, with the first CEO leaving as the financial crisis was coming to a head. The current CEO became the then Acting CEO, taking over in a time of great uncertainty and turmoil.
- There has also been a significant turnover at the senior management level, especially amongst the financial management staff. The turnover continued unabated during the worst of the financial crisis.

- A large capital project was undertaken in an unprecedented manner in the hospital community (i.e., using a construction management model, rather than a guaranteed maximum price/general contractor model). The learning curve of this model presented challenges to the Board, administration (including the capital project manager), and the MoHLTC.
- Throughout the crises, the Board received inconsistent messages from the MoHLTC about its commitment to fund operational and capital overruns. One key example of the inconsistent messages came as part of the capital project. The MoHLTC required, as a precondition to funding, that HRSRH sign a "waiver", which expressly designated to HRSRH (rather than the MoHLTC) the risk of cost overruns on the capital project. By signing the waiver, the Board committed that it would complete the capital project with the funds already made available, acknowledging that no further capital funding would be forthcoming from the MoHLTC. The "waiver" was ultimately signed, and several months later the MoHLTC finally approved the Construction Management Contract, coinciding with an announcement of $4 million in additional capital funding from the MoHLTC. This type of inconsistency between the MoHLTC's warnings and its ultimate actions clearly contributed to the Board's sense of entitlement and its almost unwavering expectation that it would be "bailed out" by additional MoHLTC funding.

FINDINGS AND RECOMMENDATIONS

MAINTAIN THE EXISTING BOARD

The Board, as it is currently constituted, has been through some difficult and trying times. Board members recognize that serious mistakes have been made and that they did not ask the right questions of management. In general, Board members assumed their positions with limited understanding of what they are accountable for, and failed to fulfill their responsibility to oversee the operations of the hospital.

However, the consultants did note an increasing awareness of the Board's role and were struck by the fact that actions have been taken recently to not only improve the quality of reporting to the Board, but also to ensure that this Board will be able to make the right decisions and to meet their fiduciary responsibilities.

The Board has been oriented by fire. Having come through this dark period, Board members have learned valuable lessons they will now be able to put to good use to improve the hospital's governance. They have learned the hard way to be much more sceptical and questioning of information and recommendations coming from administration and physicians. They are much more willing to demand information, to ask for options and alternatives, and to ask the tough questions.

The members of the HRSRH Board are dedicated and well-intentioned volunteers. Given the extenuating circumstances they faced, the consultants do not recommend the removal of the Board. Instead, our recommendations focus on how to continue to improve the Board as a whole and the skills of the individual Board members.

RECOMMENDATIONS

1. The HRSRH Board should be maintained as currently constituted; it should not be removed. The Board's skills as a Board and as individual Directors should be supplemented by implementing the further recommendations of this Report.
2. The Board should also be held accountable for ensuring that the Recovery Plan is successfully implemented in order to alleviate the current fiscal deficit. The long term ability of this Board to govern HRSRH should be measured by their ability to monitor the activities identified in the Recovery Plan, and as a result, seeing an improvement in the hospital's financial position.

IMPROVING THE BOARDS GOVERNANCE CAPABILITIES

We have considered how the experiences of the current HRSRH Board members can be supplemented to create better individual Directors and an overall improved Board. These critical recommendations are, the consultants believe, generally applicable across the hospital sector. In our experience, HRSRH is not unique in needing to address these specific governance issues and become better educated about their responsibilities as volunteer trustees of a public hospital. The consultants acknowledge that the responsibilities of volunteer trustees are enormous and the learning curve steep. In order to encourage qualified individuals to continue participating as volunteer hospital directors, increasing effort should be directed to supporting their needs.

A. Quality of Information Presented to Board

In general, we support the recommendations made by the HayGroup in its operational review of The Ottawa Hospital with respect to the board's role in demanding information from management. In particular, we endorse Recommendations 4, 5, and 6 in Chapter 3 of the HayGroup report for application to HRSRH's Board, as follows:

> "4. The Board should take more responsibility for the financial health of the hospital by insisting that management aggressively pursue opportunities to minimize hospital costs before seeking additional funding from the Ministry."
>
> "5. The CFO should further expand and enhance financial and statistical reporting to the Board to include more comprehensive analyses of variances from plan that provide not only the cause of the variance but also potential corrective actions."

> "6. The CFO should further expand and enhance statistical performance reporting to the board to provide comparisons with similar hospitals in Ontario."
>
> (HayGroup, *Final Report: Operational Review and Clinical Audit of The Ottawa Hospital*, June 2001 (the "HayGroup Report"), pages 32-33, 35.)

We also refer to the governance report entitled "Reaching for Excellence – Governance and Performance Reporting at The Princess Margaret Hospital Foundation", which stresses that the flow of information to directors is critical to the discharge of their responsibilities. The report encourages the board:

> "to accept the responsibility of being an active participant in the process and act accordingly. The Board needs to explain its information needs and interests to those who are providing it, react to the information it does receive, and work with those providing this information to form a sharply focused and reasonable governance information system.
>
> Regarding the general characteristics that this information needs to have, such information is most useful when it is presented in the context of earlier-stated expectations – and comparisons with others – as may be applicable."
>
> (The Princess Margaret Hospital Foundation/CCAF-FVCI Inc., a Joint Research Initiative (2001), p. 33.)

As part of the governance portion of the operational review, surveys were distributed to HRSRH Directors and to those individuals who had retired from the Board within the past three years. Twenty-six completed surveys were received. (Refer to Appendix III for survey results.)

The surveys indicated that most HRSRH Directors found they received an appropriate amount of information for each Board meeting; 81% of those surveyed indicated they did not receive too much information in their board packages. However, the consultants found the amount of material distributed for Board meetings to be overwhelming to organize and process. Full minutes of all committees were given to the Board, without executive summaries on key issues. Information and data were not tracked from one report to the next. In short, the Board members must wade through a great deal of background before reaching the key information they need to process and act on. Of note, the surveys found that only 35% of the respondents thought the information about the risks relating to the capital project was presented in a manner that Board members could clearly understand.

RECOMMENDATIONS

3. The Board should implement the recommendations from the HayGroup Report, listed above, with respect to the quality and diversity of information presented to the Board. Options and alternatives should be

presented by management to the Board in regular course, and the options/alternatives should include the impact of each such option on the hospital's circumstances.

4. The Board should ensure that the information presented to it allows it to focus on the problems before it. Material should be summarized and highlighted for easier review. Information must be presented in the context of earlier-stated expectations.
5. Benchmarking information should be presented to enable the Board to evaluate the performance of HRSRH against other similarly situated hospitals.

B. Increased Emphasis on Orientation, Evaluation, and Targeted Recruitment

The Broadbent Report, a leading governance study of volunteer organizations, emphasized that one of the key governance roles of any board is to ensure the board understands its responsibilities. The Broadbent Report elaborates that boards must invest in Board members with orientation and ongoing information sessions and recognize the contributions of board members and provide feedback on the board's performance. (Panel on Accountability and Governance in the Voluntary Sector, *Building on Strength: Improving Governance and Accountability in Canada's Voluntary Sector*. Ottawa: Voluntary Sector Roundtable, February 1999 (so-called "Broadbent Report"), p. 26.)

These recommendations have been reiterated in the more recent, business-sector focused Saucier Report. The Saucier Report concludes that:

> "The pace of change is so rapid, and the complexities of modern business are increasing so quickly, that continuing education and lifelong learning are as critical for directors as they are for anyone."
>
> (Joint Committee on Corporate Governance, *Beyond Compliance: Building a Governance Culture*, November 2001 (so-called "Saucier Report"), p. 16.)

Although many HRSRH Directors advised that they had participated in Ontario Hospital Association (OHA) trustee orientation sessions, many still did not fully appreciate their governance responsibilities and their accountabilities, especially with respect to implementing systems to control risk related to quality of care and finance. Those that have been involved with the OHA orientation program did not believe that the program was particularly helpful and identified a number of shortcomings and weaknesses. The hospital is in the process of refining its own educational package for new Board members. The consultants are of the opinion that Board member orientation and ongoing development is critical to the Board's ability to function effectively.

The Saucier Report also places increased emphasis on the importance of recruitment, encouraging boards to

> "engage in a disciplined process to determine, in light of the opportunities and risks facing the company, what competencies, skills and personal qualities it should seek in new board members in order to add value to the corporation." (Saucier Report, p. 15)

In light of these critical governance activities – recruitment, orientation, continuing education, and regular performance evaluation of HRSRH Board members – the consultants recommend the appointment by the MoHLTC of a "Coach" to assist the Board with these governance initiatives. The consultants envision a "Coach" with very specific responsibilities with respect to HRSRH. As previously stated, the consultants do not believe the findings of the operational review merit the removal of the Board, as has occurred in Hamilton, Ottawa and Toronto East General. The Coach is not intended to replace the Board. However, there are a number of key governance activities that the Board will need expert assistance to carry out. We recommend that the Coach works within the following mandate:

- Monitor the Board's efforts to ensure the successful implementation of the Recovery Plan;
- Advise the Board chair to assist in the implementation of the recommendations of the governance portion of the review;
- Work with the Board and the MoHLTC (and possibly the OHA) to develop an orientation program for new Board members, which would be useful for all hospital boards across Ontario. It is clear to the consultants that the existing orientation programs available to Ontario hospital directors are insufficient to allow new directors to understand the role and responsibilities of the Board and the complicated health care environment. A better orientation product is needed to assist new trustees with their learning curve;
- Work with the Board to identify skill sets needed on the Board to face current challenges and to implement the recommendations contained in this Report;
- Work with the Board to examine the role of ex-officio Directors; and
- Work with the Board to establish an annual performance review process for the Board as a whole, individual Board members, and the CEO. The consultants noted that, although the Board's responsibilities as outlined in the By-laws require the Board to "regularly evaluate its own performance in relation to its responsibilities", this responsibility has not been regularly undertaken by the Board.

The Coach must be an individual with strong governance experience and leadership skills, and preferably with experience in serving as a Chair of a multi-site hospital board.

RECOMMENDATIONS

6. A Coach with the mandate as set out above should be appointed with the primary purpose of improving the Board's governance capabilities.

7. The Coach should assume a strong role in ensuring that the Board fulfills the critical requirements related to oversight of the Recovery Plan process, and will be required to report on a regular basis to the MoHLTC. In the event that the Coach determines that the Board and HRSRH management are unable to successfully implement the Recovery Plan, he/she may recommend that the MoHLTC consider the appointment of a Supervisor as has occurred in other organizations.
8. The Coach must be an individual with a strong governance background and demonstrated leadership skills, preferably with experience in serving as a Chair of a multi-site hospital board.
9. HRSRH should continue to develop its orientation program, with the assistance of the Coach and, ideally, input from the MoHLTC.
10. The Board orientation process should be mandatory for all new Board members.
11. An ongoing Board development program should be established on an annual basis, based on the strategic direction and yearly goals and objectives.

C. Independent Audit Committee

The Saucier Report contains an entire section devoted to the proper composition and mandate of the audit committee. Admittedly, the Saucier Report focuses on "offering" corporations, such as those that are listed on the Toronto Stock Exchange. In Ontario, most of these corporations are governed by the Business Corporations Act (Ontario), which requires that the corporations have a distinct audit committee. The Saucier Report looks to both U.K. (the "Turnbull Report") and U.S. (the "Blue Ribbon Report") reports in developing its recommendations for the ideal Canadian audit committee. However, it is the consultants' view that public/offering corporations and public hospitals are analogous in their need to demonstrate financial integrity to the stakeholder public.

The Saucier Report makes the following specific recommendations with respect to the composition and mandate of the audit committee:

- Audit committees should be composed solely of outside directors (i.e., no members of management).
- All members of the audit committee should be "financially literate" and at least one member should have accounting or related financial expertise. It is up to each board to define and set criteria for "financial literacy".
- Audit committees should adopt a formal written mandate that is approved by the full board and that sets out the scope of the committee's responsibilities. HRSRH should also consider developing broader mandates for Board committees and should refer to recently published material/literature to guide them in this analysis.
- Specifically, the audit committee needs to assure itself that:

- the external auditors are independent from the corporation;
- the external auditors are satisfied that the accounting estimates and judgements made by management reflect an appropriate application of GAAP; and
- it has developed a relationship with the external auditors that allows for full, frank and timely disclosure of all material issues, with or without management as appropriate in the circumstances. (Saucier Report, p. 59)

The audit committee as envisioned by the Saucier Report is proactive, critical, objective, financially literate and independent from the corporation's management. It engages in full and frank discussion with the external auditors about management's competence and judgement. It is a key player in the board's accountability to its stakeholders for the financial viability and integrity of the corporation.

The recommendations of 1999's Broadbent Report focus specifically on the governance of not-for-profit and charitable corporations in Canada and foreshadow the recommendations of the Saucier Report. Unlike public / offering corporations, there is no statutory requirement in Ontario for a public hospital to have a separate and distinct audit committee. However, the Broadbent Report strongly recommends that every not-for-profit and charitable corporation in Canada have a separate audit committee:

> "The way in which the organization and the board are structured can contribute to or hamper effective stewardship. … For an organization governed by a board, it should provide independent oversight and effective stewardship. To meet these goals, we suggest that an organization have at least three basic elements:
>
> - a board capable of providing objective oversight;
> - an independent nominating committee to ensure the appropriate succession of the board; and
> - an audit committee, whose primary responsibility is to report whether the organization is in compliance with the laws, rules, regulations and contracts that govern it. It also reviews whether the management, information and control systems are organized and implemented to carry out these rules and regulations, and as well is responsible for supervising external financial reporting." (Broadbent Report, p. 33)

It is not surprising that the Broadbent Report would recommend that every not-for-profit corporation have an audit committee – the Broadbent Report, in effect, equates not-for-profit and charitable corporations with public / offering corporations. A public hospital must be able to withstand significant scrutiny with respect to its financial integrity, in order to ensure that stakeholders (such as the MOHLTC and the community) – like public company shareholders – are receiving value for their "investment" in the corporation.

RECOMMENDATION

16. The Council should ensure the establishment of [illegible] audit committee [illegible] of reference consistent with the recommendations of the [illegible] Report.

The remainder of this Chapter focuses on additional specific recommendations for the improved governance of HRSRH.

ACCOUNTABILITY

Increasingly, hospital boards are being required to address the fundamental issue of accountability. Unlike the private sector, hospitals operate in the public interest and are obliged to acknowledge the interests of multiple key stakeholders, including the communities they serve, the [illegible], medical staff, other health care providers, employees, patients or clients they provide care and [illegible].

Hospital boards of today must address the needs of the community and be fiscally responsible. The business of governance in today's health care environment is focused on making extremely complex decisions involving difficult "trade-offs". The consultants are of the opinion that hospital boards are required to challenge their senior management teams and medical staff to propose tangible options and quantifiable strategies to address both community needs and resource availability.

It is apparent that members of the Board of HRSRH are unclear about their role and accountability. Specifically, many members of the Board did not appear to understand the balance required between providing quality care and working within existing financial resources. However, the Board clearly understands its commitment to the community and the patients served by HRSRH. [illegible] recognized the support HRSRH receives from the community.

In the survey conducted as part of this operational review, Directors indicated a belief that the Board was effective in the following areas:

- Steering the hospital towards its mission (88% positive responses);
- Communicating to members, stakeholders, and the public (88% positive responses);
- Understanding the role of the Board in relation to the role of management (88% positive responses);
- Avoiding conflicts of interest (88% positive responses); and
- Ensuring effective management is in place (77% positive responses).

[illegible]

- [illegible]
- [illegible]
- [illegible]

[illegible]

- [illegible]
- [illegible]

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[illegible]

[illegible]

- [illegible]
- [illegible]

- Being transparent, including communicating to members, stakeholders, and the public, and responding appropriately to requests for information;
- Developing appropriate structures for the organization;
- Maintaining fiscal responsibility;
- Ensuring that an effective management team is in place and providing oversight of human resources;
- Implementing an outcome-based assessment and control systems; and
- Planning for the succession and diversity of the board.

We strongly suggest that the HRSRH Board consider these broad guidelines in order to develop a clear role definition for HRSRH Board members. This role definition will not only assist Board members to more clearly understand their role and responsibilities, it will also provide support and a framework for an appropriate evaluation tool.

RECOMMENDATIONS

13. The Coach should assist the Board in defining its individual and collective responsibilities. Board members must fully understand and adhere to these requirements.
14. The Coach should build on the high degree of commitment demonstrated by the current Board and should develop an increasing awareness on the part of the Directors as to their fiduciary responsibilities.

QUALITY OF CARE

Ensuring the quality of patient care is clearly one of the key responsibilities of a hospital board. This requirement appears to be a major deficiency in the current functioning of the Board. The Board has not set explicit standards related to the quality of care provided by the hospital, and Board members demonstrated a lack of understanding of their role in overseeing the quality of care. This finding was corroborated by findings from the self-evaluation process completed in February 2002 in which the lowest scores were in the Quality Assurance/Credentialing section. Many Board members also commented on the lack of readily available and broadly used benchmark and comparative information on which to evaluate HRSRH's performance. In the consultants' experience, this information is available and can be accessed through the Canadian Institute for Health Information (CIHI) and the MoHLTC, as well as through private sources.

Those interviewed expressed the opinion that, while there had been much discussion at the Board level about the quality of care, little definitive action had been taken to address this issue. While there had been a Quality Assurance and Risk Management Committee reporting to the Board in the past (it is a standing committee of the Board, according to the By-laws), this Committee has not been actively meeting or reporting directly to the Board with respect to quality issues for the past three years. The Board has relied on management, and specifically the Chief of Staff, to provide it with information related to the quality of care provided at HRSRH. Board members have used the MAC minutes, which include reports from the Medical Quality Assurance Committee (which has a different purpose and mandate than that of a Board Quality Committee), as the primary source of information related to quality of care.

The consultants also noted an absence of a balanced scorecard approach to ensuring overall hospital performance and provision of high quality care and are of the opinion that, at the Board level, there were few formal reports and a significant amount of hearsay used to evaluate quality. Quality is not an agenda item at every Board meeting. HRSRH's participation in the OHA Report Card is noted, however this information is not specifically tailored to the populations and community served by HRSRH. The need for the focused collection and analysis of information with regard to the care provided at HRSRH cannot be emphasized enough.

Recently, the Board and senior management have recognized this significant shortcoming and have developed plans to institute a Quality Committee reporting directly to the Board on a regular basis. This committee will be re-established, and draft terms of reference will be presented to the Board. As well, the Board and the hospital have expressed their commitment to the implementation of a performance scorecard initiative.

In the survey, 62% agreed with the HayGroup recommendation that a Joint Conference Committee be re-instituted to ensure open communication between administration, the board and the medical staff.

RECOMMENDATIONS

15. Quality of care must become an immediate priority for the Board. Recent plans to address this issue are recognized; however, along with many other issues confronting the Board, established processes must be developed and followed.
16. A balanced scorecard approach to performance measurement should be implemented by June 2003.
17. A Quality Committee of the Board should be immediately established, with terms of reference approved by the Coach, and should provide written and verbal reports on progress and issues at every Board meeting. During the recovery plan period, the Senior Management Team is to ensure performance measurement and departmental indicators are based on best practices.
18. The Board should build on the comprehensive clinical and financial benchmarking analysis conducted as part of this review and should evaluate hospital performance in relation to similar organizations on an ongoing basis.

19. The Board should consider re-instituting the Joint Conference Committee, with representation from administration, the Board and all health care professionals at the hospital, to ensure open lines of communication.

CREDENTIALING

As part of its responsibility to oversee the quality of care, a hospital board is also responsible for ensuring that appropriate credentialing processes are in place. When asked if they participated meaningfully in the credentialing process, Board members responded negatively (77% responded that they were not meaningfully involved in credentialing of physicians and dentists; 81% said they were not meaningfully involved in credentialing of midwifery staff). They expressed trust in the ability of the Chief of Staff to oversee the reappointment process, and noted that they were slightly more involved in the appointment of new physicians.

Survey results revealed a significant lack of understanding with respect to the level of involvement of the Board in credentialing. For example, Board members were evenly divided in their responses to the survey about whether the Board periodically assessed the rigor and thoroughness of its credentialing process. Only 19% of the board thought the Board had benchmarked its credentialing process with that of its peers. The Board members did not appreciate that credentialing is a yearly process that is critical to the Board's risk management responsibilities and that must be undertaken in a meaningful manner each and every year. An excellent reference that explains how hospital boards meaningfully interact with the Medical Advisory Committee in the credentialing process is set out in the text *Board Work: Governing Health Care Organizations* by Dennis D. Pointer and James E. Orlikoff (San Francisco: Josey Bass, 1999) at pages 57 through 61.

The survey responses indicated that a number of Board members thought the Board had addressed changes to the *Public Hospitals Act* that allow the Board to grant privileges to extended class nurses (42% positive response) and 38% of the respondents believed the Board had considered how extended class nurses could be incorporated into the hospital's professional staff to relieve pressures on physicians. In fact, the consultants noted that the HRSRH By-laws do not establish a process for credentialing of extended class nurses. Extended class nurses can be used within the hospital to alleviate the demands on physicians.

RECOMMENDATIONS

20. Board members should assume an increasingly active role in overseeing credentialing processes. The consultants endorse the Pointer & Orlikoff approach to board involvement in credentialing.
21. The Board should update the professional staff portion of its By-laws to incorporate a credentialing process for extended class nurses and actively explore utilizing extended class nurses to relieve pressures on the physicians.

FINANCIAL RESPONSIBILITY

Successful organizations, including health care organizations, need to demonstrate a clear focus on their core objectives and a bias towards speedy action. Although we recognize the number of significant issues that the Board has had to address since the merger, it is our opinion these characteristics have not been consistently present at HRSRH.

For instance, the Board has not directed the organization to develop and maintain consistent Recovery Plans to address the deficit situation. However, Board members acknowledged that the hospital has been in a significant deficit position for some time. They also noted that they felt unable to take any action (i.e., reduce level of service) because the MoHLTC had expressly informed them they were not to cut services. However, in the correspondence from John King, dated July 13, 2001, the Assistant Deputy Minister directed the hospital to focus on "reducing administrative costs and achieving greater operating efficiencies, while recognizing the priority of nursing services. Patient care services are to be a top priority in each hospital." It is interesting to note that some programs were subject to uncontrolled growth (e.g., endovascular stenting and joint replacement). Board members expressed differing levels of willingness to make decisions regarding service reductions to balance the budget. Only 42% of respondents were prepared to make service reductions, "if required to do so", and 31% of the respondents expected the MoHLTC to make the service reductions on behalf of the Board. Surprisingly, a full 23% of the respondents were not even aware that the Government had proposed balanced budget legislation for hospitals in the Spring of 2001.

The Board's demonstrated reluctance to reduce services and deal with the deficit resulted in the Board requesting an operational review in the fall of 2000. There is little evidence to suggest that the Board was truly committed to developing internal solutions to the worsening financial situation. This resulted in a lack of a comprehensive, sustained plan of action.

Many Board members articulated the belief that the hospital is under funded, and considered this fact to be at the root of the financial difficulties. When asked if overspending had contributed to the current situation, they expressed the view that this was not the case in HRSRH. Survey results also revealed that the Board was relatively neutral when asked whether or not they agreed with the conclusions of previous operational reviews that a hospital must provide services within its funding envelope (54% agreed; 19% disagreed; 27% were noncommittal). As well, only 54% of respondents in the February self-evaluation indicated that the Board has approved and uses financial indicators and targets against which to measure hospital performance.

RECOMMENDATIONS

22. Board members must fully understand and accept their fiscal responsibilities. There is a critical need to establish financial indicators and standards by which the Board can measure and monitor the hospital's fiscal performance. The Coach should assume an assertive role in ensuring that these indicators are identified and monitored appropriately.
23. The Board must monitor uncontrolled spending and/or growth and assume a more proactive stance in providing senior management with direction in the event this continues to occur. The independent Audit Committee recommended previously is critical to this monitoring role. The Coach should also evaluate the ability of the Board to perform this critical function.
24. The Board should establish a philosophy that renders management and the organization fully accountable for managing within the envelope of funds entrusted to the organization. Utilization should be carefully tracked at all levels.
25. The Board should direct management to develop and maintain a comprehensive Recovery Plan in collaboration with the MoHLTC and the consultants, based on the recommendations from the Operational Review. This Recovery Plan should be approved and monitored by the Board and the MoHLTC on a frequent, regular basis.
26. The Board should prioritize the services that the hospital provides to the catchment area, taking into account demand for services, acuity of service, and availability of services elsewhere in the Province, as a tool to assist with service reductions, if required.

COMMUNICATION WITH THE MOHLTC

Board members interviewed indicated significant frustration in trying to address the deficit situation, due to inconsistent communications with the MoHLTC. Seventy-three percent of survey respondents said that the MoHLTC did not provide clear and consistent messages to the hospital. They are of the opinion that the MoHLTC has not provided them with clear direction in terms of the growing deficit, which opinions were supported by the documentary review undertaken by the consultants. However, on three occasions, MoHLTC representatives from the regional office and from Toronto have attended Board meetings to discuss their deficit and/or the capital project. There also appears to be confusion on the part of the hospital as to who communication should be directed towards – the Regional Director or the appropriate Assistant Deputy Minister. As well, it is noted that the length of time elapsed between letters sent by the hospital and the MoHLTC response has been excessive. Eighty-eight percent of survey respondents were of the view that the MoHLTC did not provide timely feedback. The documentary review supports this conclusion, although the consultants note that changes in staffing, including at the Minister's level, made some of these delays unavoidable.

The generally positive working relationship between HRSRH and the regional office staff is noted. Regular meetings with the MoHLTC regional office and the Board Chair/CEO were established in 2001. As well, all parties have worked effectively to date in the initial stages of developing a Recovery Plan.

Board members also believe that this situation was confounded by unpredictable funding decisions by the MoHLTC. There is a sense, at the Board, that the MoHLTC has repeatedly provided other organizations in the province with one-time funding to help offset deficits. In this context, Board members have felt that the MoHLTC will come to the assistance of HRSRH, given the ongoing deficit and the overruns associated with the capital project. Underlying the Board's approach to financial overruns is often the following question: "Why make painful budget reductions, if the MoHLTC will ultimately bail the organization out?"

RECOMMENDATIONS

27. The Board should direct management to seek clarification on the appropriate contact officials at the MoHLTC and to initiate a process for improving ongoing HRSRH/MoHLTC communication. With respect to operational issues, the Regional office will be the primary contact.
28. HRSRH must identify the appropriate mechanisms for monitoring the implementation of the Recovery Plan. It will be important for the Coach to monitor this activity and provide regular feed back to both the Board and the MoHLTC on progress made. The Board should agree with the MoHLTC on the key metrics that will be used to evaluate the implementation and report these accurately and on a timely basis to the MoHLTC.
29. The consultants strongly support the stated intention of the current Government to move towards a multi-year approach to budgeting and funding, which will allow better planning and enable increased accountability within the hospital sector.

BOARD RELATIONSHIP WITH SENIOR MANAGEMENT AND THE CEO

An effective board focuses on what needs to be done – it sets the strategic direction and establishes appropriate policies for the management team to follow. The CEO and senior management team should direct their attentions to how to implement and manage these policies, as well as how to best report on their status to the Board. Good governance is dependent upon an excellent management team.

The HRSRH Board has been effective in clearly defining the roles and responsibilities of the CEO. It has identified specific performance expectations of the current CEO and will measure her performance against agreed upon criteria. Current Directors believe that the current CEO has provided them with sufficient information to make informed decisions (85% positive response) and note her willingness to be open and collaborative. When asked if they believed the current CEO possessed the capability to make tough decisions that will be required to implement the Recovery Plan, responses were varied. There is no doubt that the current CEO has the confidence of the community, due in large part to the fact she is a native of Sudbury.

Board members do not believe the previous CEO provided them with adequate information (19% positive response), particularly with respect to the capital project. Directors, both past and present, were frustrated by the fact that, from their perspective, they rarely received a sufficient answer to their questions. While they also acknowledge that they frequently asked the wrong questions, they do not believe the previous CEO was forthcoming and transparent in his deliberations with them. The documentary review revealed that the Board was not given appropriate time to review and consider operational plans and budgets in a meaningful way, prior to the current CEO.

When asked if they agreed with the finding in the Hamilton operational review that a Board should treat information received from administration with a "degree of oversight and healthy scepticism" the responses were extremely varied (54% agreed, 27% disagreed, and 19% were noncommittal). They also noted the difficulty the organization has experienced in finding and retaining senior managers, particularly with respect to the Chief Financial Officer position.

The current Board does not appear to have regularly become involved in day-to-day operational matters. The survey found that none of the respondents believed the Board often became involved in day-to-day operational matters, and 58% believe the Board sometimes became involved in operational matters.

Recent evidence suggests that the Board has improved its ability to effectively question management with respect to relevant issues; however, the consultants noted that management has been less than effective in preparing detailed options with appropriate rationale for Board consideration.

Given the current situation within HRSRH, there appears to be a need to critically evaluate the key competencies required by members of the senior management team. All positions should be reviewed within the context of the current environment and the requirement to successfully implement the Recovery Plan.

RECOMMENDATIONS

30. To facilitate the Board's accountability for organizational direction and performance, greater emphasis should be placed on ensuring that key decisions are made after full consideration of decision options and comprehensive analysis. To this end, the Board should direct management (represented by the CEO) to articulate options and provide supporting analysis to these options.
31. The Board and management should continue to improve reporting requirements and mechanisms. In the short to medium term, the Board may require more detailed information to allow them to appropriately

oversee rigorous adherence to the Recovery Plan. The Coach should assist the Board in creating an appropriate information flow between management and the Board.

32. Board members should continue to develop their abilities to assertively question management.
33. The Board should address issues associated with the ability to attract and retain senior managers who possess the skill sets that will be required to successfully implement recommendations associated with the Recovery Plan. It is recognized that the Board is only directly responsible for the CEO and the Chief of Staff; however, the Board should oversee the recruitment of senior managers who possess the appropriate requirements during the period of time in which the Recovery Plan is being implemented.
34. The Board should evaluate the key competencies and requirements for both the CEO and the Chief of Staff, and direct the CEO to evaluate the current structure of senior management with a view to evaluating the suitability of those currently in senior roles. The CEO should provide a report to the Board by January 2003.

POLICY DEVELOPMENT

In general, the Board has appropriate policies in place to support governing activities (i.e., conflict of interest, confidentiality, etc.). However, the consultants noted the absence of a policy with respect to Board solidarity and authority to speak on behalf of the corporation. In fact, the existing Media Guidelines for Board Members allows Directors to publicly express opinions that are contrary to those adopted by the hospital, which can lead to undermining of the Board and decreased public confidence in the hospital's governance. A Policy Governance Committee is developing additional policies, including, but not limited to, Executive Limitations. Currently, this initiative is on hold, and will be revisited in the near future.

The Board has an extremely detailed set of Rules of Procedures and is quite savvy with respect to Board procedures. There is a detailed in camera policy (describing when to move in camera); however, concerns were expressed that too many issues are discussed and dealt with in camera. The consultants are of the view that the public portion of Board meetings is insubstantial.

RECOMMENDATIONS

35. The Board should continue to develop best practice policies, with attention being paid in the short term to addressing the lack of policies pertaining to Board solidarity and authority to speak on behalf of the corporation.
36. The Board should revise the current in camera policy, with a view to limiting the amount of time spent in camera to those issues, which do indeed require confidential discussion.

BOARD COMPOSITION AND STRUCTURE

The Board is comprised of a highly dedicated and committed group of individuals with a generally appropriate range of skills and experience to discharge their governance responsibilities. Despite the many challenges associated with acting as a volunteer trustee, the Board members are willing to hold positions of responsibility and are undoubtedly committed to the provision of health care in Sudbury and Northeastern Ontario

Board members' knowledge of the health care industry, its operations, and funding varies. The Board relies heavily on the senior management team to provide this content and to provide guidance on potential courses of action. The current Board is also a relatively young Board and lacks institutional knowledge and in some instances an understanding of its fiduciary responsibilities. The need for more business-oriented people on the Board was acknowledged. As well, there is a need for individuals possessing expertise in engineering and/or construction. Individuals with recent experience with restructuring and change management would also assist Board functioning.

Many current Board members expressed the opinion that the Board of HRSRH is large. There are 12 elected members and 7 ex-officio members. Of note, 85% of the respondents did not think there were too many ex-officio Directors. A downsized Board would require some rethinking about the standing committee structure, since it would be impractical to expect a smaller number of Board members to each take on additional committee responsibilities.

In general, Board Committees appear to be functioning relatively effectively. They have specific terms of reference and, consistent with the requirements of the By-laws, the terms of reference are regularly reviewed. Upon reviewing documents provided by the hospital, the consultants found many instances where committees did not have quorum to act. It also appeared as though the Nominating Committee did not address the issue of attendance at Board/Committee meetings.

In rethinking the committee structure, we would recommend that the Human Resources Committee be disbanded; its focus is far too operational for a Board level committee. We also recommend that the Nominating Committee take on a further mandate of ensuring that there are adequate orientation, continuing education and evaluation processes in place to support the Board members.

Finally, the documentary review indicated that the role of the Executive Committee seems to create some confusion. Unlike most Executive Committees, the HRSRH Executive Committee has power to make decisions on behalf of the full Board only during the summer, when the Board does not regularly meet. The consultants recommend that, in order to deal with urgent matters throughout the course of the year, the

Executive Committee be given the mandate to make decisions on behalf of the Board, between regular Board meetings, only in matters of administrative urgency.

RECOMMENDATIONS

37. The Board should examine its committee structure and determine if the roles and responsibilities of certain standing committees could be merged, thus potentially reducing the required commitments of volunteers.
38. The Human Resources Committee should be eliminated.
39. The Nominating Committee should assume a more assertive role in identifying and recruiting individuals who possess the required skill sets to improve Board functioning and decision making. As well, the Nominating Committee should consider the attendance record of Board members when considering re-election to the Board. This Committee should also assume an expanded governance role to ensure appropriate orientation, continuing education and evaluation of the Board.
40. The Executive Committee should be given the mandate to make decisions on behalf of the full Board, only in matters of administrative urgency, throughout the year.

BOARD PROCESSES AND DECISION MAKING

In general, the Board believes it uses the hospital's mission as a frame of reference in its discussions, deliberations, and decision making (83% positive response). Although the HRSRH "core values" include accountability to both the taxpayer and the patient, in fact accountability to patients has always taken precedence over accountability to taxpayers. Board members also expressed the opinion that there ability to make effective decisions has improved in the past 18 months. In part, this is due to the Board's increasing awareness of the need for improvements in reporting and an understanding that they are required to ask the right questions to ensure appropriate oversight of HRSRH. The consultants concur with the latter comment, and are of the opinion that the Board does possess the ability to make decisions in a timely manner, and once a decision has been made, Board members support the decision.

However, the level of engagement of some Board members is variable. It appears from the minutes, as well as interviews, that a small group of trustees ask questions, seek clarity on issues, and push their thinking to ensure they understand issues to the best of their ability. Others tend to adopt a more passive role. In general, Board members noted that meetings are generally effective and efficient (67% positive response).

The issue of Board orientation was raised by many as a matter of concern, and the consultants have reiterated and reinforced the critical importance of orientation earlier in this Chapter.

RECOMMENDATIONS

41. The Board Chair should encourage more active participation on the part of all Board members in discussion and decision-making. He/she should provide feedback to Board members as to their effectiveness and should assist them in developing strategies to foster their productive involvement. The Coach should assist in this process, and should consider developing an evaluation tool and process to determine the effectiveness of Board meetings.

BOARD INVOLVEMENT IN THE CAPITAL PROJECT

With respect to the capital project, eight of the current Board members were not on the Board at the time of many of the major decisions related to the project (i.e., the decision to adopt a construction management approach). Review of Board minutes supports the notion that many of the decisions that have contributed to the increasing costs associated with the construction (i.e., the cladding and exterior finishes) were strongly influenced by legacy Board members. It is important to consider the impact of history when examining the role of the Board as it relates to the construction of the new building. Prior to the HSRC directions, the community had come to an acrimonious agreement regarding a two-site model for Sudbury. Upon receiving the HSRC directions related to one site, many legacy Board members held the perspective that the HSRC had forced them into a one site model, which negated all the effort that had gone into the development of a two site option. At that time, many held the perspective that the HSRC "made us do this, and we're not going to scrimp and save." Promises were made that the one site model would be equal to or better than what was in place before. It is important to recognize that community opinion has since shifted to support the one site model.

Reporting with respect to the capital project was a major deficiency. Building and Planning Committee members regularly received PCL construction reports, which could be as voluminous as 300 pages. Frequently, these reports were inaccurate, in that numbers included in charts would not add up. No summaries were provided to Board members with respect to costs, variances, and reasons for variances. Additionally, change orders were not easily identifiable.

Those interviewed expressed the opinion that PCL, the architects, and hospital management frequently did not seem to be fully aware of the status of the capital project, and fully acknowledged that, as Board members, they did not ask the detailed questions required to understand complex implications associated with decisions they made. With unanimity, Board members (as well as hospital management) recognize that the organization had confidence in PCL and relied on their recommendations and advice with regard to the capital project.

The revelation in September 2000 that there were significant financial overruns with the capital project came as a shock to the majority of Board members. Management did inform the Executive Committee of potential cost overruns earlier in the summer of 2000 however, little immediate effective action was taken at that time. The full Board was not informed until September. However, a careful review of [illegible] documentation related to the project clearly indicates increasing costs. Board members strongly expressed the opinion that they had not been adequately informed about issues related to the project prior to September 2000. They also noted that once they were made aware of the extent of the fiscal problems, appropriate actions were taken by management, such as hiring [illegible] to conduct a cost analysis and insisting upon regular reports.

Significant concerns exist on the part of Board members regarding the signing of the liability waiver that set out terms and conditions for the hospital's use of the construction management approach. Many felt they had no choice but to sign the waiver, and now question the decision to adopt this approach in the first place. The need for a shadow team working on behalf of the hospital to ensure that plans were being appropriately adhered to and costs controlled was recognized, in hindsight, as a major deficiency. Current best practice, especially with regard to projects utilizing a construction management approach, clearly points to the need for organizations to engage their own staff to oversee all aspects of such large scale projects – this includes matters related to design, construction, costs and contracts.

It is apparent that the management of the capital project has significantly improved with the appointment of the new Construction Project Director. Board members have been surprised at some of his recent findings (e.g. number of unapproved change orders) but have confidence in his ability to ensure that the necessary controls are implemented. As well, there has been a significant improvement in the functioning of the Building and Planning Committee, due in large part to changes in reporting processes.

RECOMMENDATIONS

45. The Board should continue to build on recent improvements with respect to reporting processes and ongoing vigilant monitoring related to the capital project.
46. The Board must recognize and objectively consider the implications of the significant financial overruns associated with the capital project. The ability of the community to meet its financial commitment is seriously in question, depending upon the option selected for moving forward with the construction.
47. Depending upon the degree of construction required in Phase 2 of the capital project, the Board should provide management with specific direction as to the need for a shadow team to oversee all aspects of construction under the direction of the current Construction Project Director.

5. MANAGEMENT AND ORGANIZATION

INTRODUCTION

[illegible]

[illegible]

CONTEXT

HISTORY

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

CURRENT MANAGEMENT STRUCTURE

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- [illegible]
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Each program has a program council, with multidisciplinary representation and responsibility for identifying, reviewing, resolving, and making recommendations related to quality, risk, utilization and delivery of services. All programs are led by an Administrative Director; there are also Medical Directors for the Critical Care, Surgical, and Medical programs. Through representation by the Directors, these program clusters take part in the Joint Program Council, responsible for planning, coordinating, and integrating the strategic activities, systems and process across HRSRH.

The Vice President & Chief Nursing Officer and the Chief of Staff participate in the Joint Program Council and have reporting responsibility for the clinical programs, as well as clinical support services including Diagnostic Imaging, Laboratory Services, and Pharmacy.

The Chief of Staff also has responsibility for Information Management – including Clinical Informatics, Decision Support and Reporting, and Applications and Information Systems support – as well as Medical Affairs.

The Vice President of Human Resources and Support Services portfolio includes:

- Human Resources;
- Volunteers;
- Building Services;
- French Language Services;
- Housekeeping;
- Food Services;
- Occupational Health and Safety;
- Material Management;
- Biomedical Engineering; and
- Equipment Planning.

The Vice President and Chief Financial Officer are responsible for Finance. The Construction Project Director is responsible for the planning and management of the construction of the new hospital. The Vice President Communications and Government Relations are responsible for external relationships for HRSRH, including public relations. General Counsel provides legal counsel to HRSRH, as required.

FINDINGS AND RECOMMENDATIONS

STRUCTURE

The program management model at HRSRH is evolving, as illustrated in the February 2002 HRSRH Program Management Structure update that was released by the President and CEO and the Chief of Staff. In this update, progress is reported as well as ongoing initiatives, including the appointment of clinical leaders and the development of a professional practice model. It is clear that the program management model continues to be refined and adapted to the workings of HRSRH. It will be essential to continue to evaluate the program management model to ensure that the programs meet community and patient needs.

The dual leadership structure (administrative program director and medical program director) for the programs strongly supports the integration of clinical and administrative objectives. The dual leadership structure should be expanded to include all programs. This is a positive model that has been well accepted at HRSRH.

As with all organizations that use a program management structure, there is room for improvement in the clarity of Director roles, especially related to the Medical Program Directors. Clarification is required to delineate the specific roles and responsibilities of Medical Program Directors and Department Heads.

The role of the Joint Program Council (JPC) is currently unclear. Although this is not surprising considering its recent implementation, a clear role of this Council and its relationship to the Program Councils is critical to effective planning and implementation of care and support processes. As well, the relationship between the JPC and Senior Management requires clarification. A review of Senior Management meeting minutes for the past two years demonstrated inconsistencies with regard to JPC issues, with a noticeable lack of regular reports.

A documentary review also illustrated an inconsistent approach to quality and risk issues. The February 6, 2001 minutes refer to a first meeting of a CQI Council, and notes the need to "filter" the 170 quality initiatives in place at that time. Subsequently, the October 16, 2001 minutes mention a presentation related to a preliminary plan for Quality Council. However, future references to the Quality Council or its achievements were not found in other minutes of the Senior Management team meetings, and it is unclear as to which individual on the senior team is responsible for leading the hospital's approach to quality management.

The Senior Management Team is a relatively newly configured team. The past few years have seen a multiplicity of Chief Financial Officers and several acting positions in Senior Management. This has resulted in some turmoil and distraction for the team.

The appointment of a construction director has greatly benefited the Senior Management team, with capital planning issues addressed in a more timely and comprehensive manner since this appointment. Capital issues are now dealt with at the beginning of every Senior Management meeting. The previous secondment of the acting Chief Financial Officer (CFO) was also seen as a positive step, leading to the permanent hiring of the current CFO. The current CFO is functioning effectively, and has streamlined reporting mechanisms for the Finance and Audit Committee of the Board. As well, he is collaborating with the Construction Project Director to ensure that the costs associated with the Capital project are being carefully monitored and separated from operating costs.

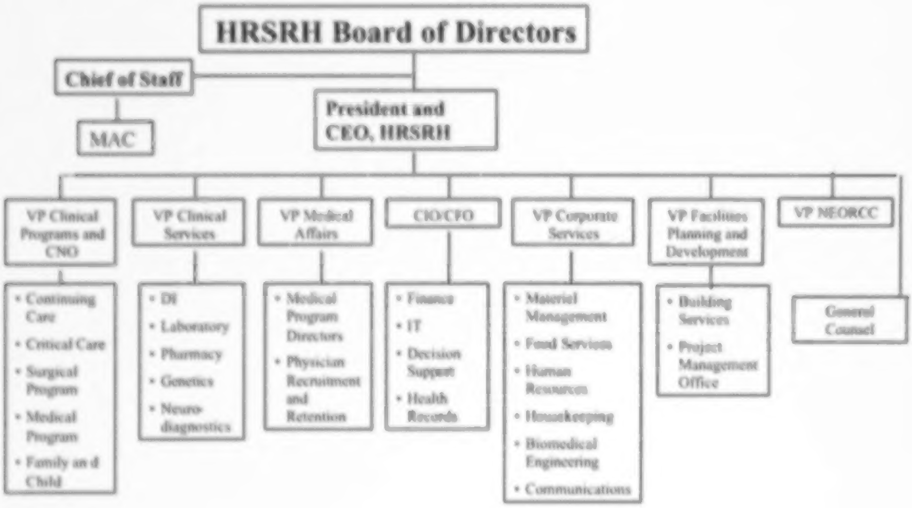
In the longer term, the need for legal counsel representation on the Senior Management team should be reviewed. Legal counsel is also responsible for risk management issues at HRSRH, and given the current situation it would appear to be prudent to retain this position at this time.

RECOMMENDATIONS

45. Conduct an evaluation of the current program management structure, to ensure that community and patient needs are best met by the existing program clusters.
46. Revise the Senior Management structure and roles to ensure a more equitable distribution of HRSRH programs and departments. The new structure should emphasize the strategic role of the Vice President.
47. Create a new position responsible for leading quality initiatives and risk management. While this position is not a Vice Presidential role, it should in the initial short-term report directly to the President and CEO.
48. Consider the feasibility of creating a Chief Operating Officer (COO) role. Given the increasing size and evolving role of HRSRH, there may be a requirement for a COO to assume greater responsibility for operating issues, allowing the CEO to focus to an even greater degree on key strategic issues in the future. In particular, the CEO may be required to actively explore other financing models in order to complete the capital project.
49. Re-evaluate the role of Vice-President, Communications and Government Relations on the Senior Management team, with a view to restructuring the position to that of an advisor to senior leaders.

The following organizational chart is presented as an example for consideration by HRSRH as they determine which senior structure will best serve the organization in the future. It should not be interpreted as a recommendation, but merely as one example of a model that will meet the needs of the hospital (See Exhibit 8).

Exhibit 8: Proposed Senior Management Structure


HRSRH Board of Directors
Chief of Staff
MAC
President and CEO, HRSRH
VP Clinical Programs and CNO
• Continuing Care
• Critical Care
• Surgical Program
• Medical Program
• Family an d Child
VP Clinical Services
• DI
• Laboratory
• Pharmacy
• Genetics
• Neuro-diagnostics
VP Medical Affairs
• Medical Program Directors
• Physician Recruitment and Retention
CIO/CFO
• Finance
• IT
• Decision Support
• Health Records
VP Corporate Services
• Material Management
• Food Services
• Human Resources
• Housekeeping
• Biomedical Engineering
• Communications
VP Facilities Planning and Development
• Building Services
• Project Management Office
VP NEORCC
General Counsel

DECISION-MAKING AND ACCOUNTABILITY

Effective decision-making and acceptance of accountability is paramount given the challenges facing HRSRH. The following summarizes the consultants' observations regarding the decision-making and accountability structures and processes of Senior Management:

- The Senior Management team possesses the ability to identify areas of concern, which require strategic or tactical intervention. However, there is limited evidence that this team is able to implement appropriate strategies to address these areas of concern. For example, the September 25, 2001 minutes of the senior management team noted that the MoHLTC requested that HRSRH achieve $10 million in efficiencies. In response, HRSRH suggested reductions in the following areas:
    - Diabetes education
    - HIV Clinics
    - Outpatient Clinics

  However, these programs were deemed to be protected by the Ministry, and therefore, the hospital was directed to look for other efficiencies. The minutes reflected that the discussion then focused on opportunities related to overtime, absenteeism and payroll inefficiencies. These measures in and of themselves would be unlikely to render $10 million in savings. The minutes of senior management meetings do not reflect that more substantive discussion of possible efficiencies occurred either at that time or at subsequent meetings. Another example relates to Alternate Level of Care (ALC) concerns. In the course of the interviews for the Operational Review, HRSRH staff and physicians acknowledged that this issue has affected the hospital's ability to effectively manage clinical operations. However, the first mention of the need to address ALC appears in the March 5, 2002 minutes. The minutes state, "despite ongoing discussions with the Ministry, no solutions or additional funding have come forward". There is no evidence in the minutes that further discussion examined possible actions the hospital might take to alleviate the ALC pressures.

- Long-standing members of Senior Management coalesce on some issues, which may create a barrier to effective dialogue and decision-making.
- While well intentioned, the senior team has struggled with the challenge of balancing community needs with the responsibility for financial accountability. The minutes of April and May 2001 frequently acknowledge the $30-32 million deficit, but no decisions appeared to have been made by the team to institute measures to address the financial situation. Instead, the discussion appears to focus on the need for the MoHLTC to understand the reasons for the deficit (April 10, 2001) and issues related to Ministry funding (May 29, 2001).
- The Senior Management team does not function strategically. Members tend to get involved in making smaller, tactical decisions and lose focus on the strategic priorities of the organization. As a result, the important and difficult decisions are not adequately addressed at Senior Management. Members of the team have acknowledged that they deal with a "lot of fires". Documentary review would support this perspective, in that the minutes reflect that attention was paid by the senior team on issues such as approving maternity leaves, OR trade shows, and equipment service contracts.
- The attention of the Senior Management team seems to have been diverted, for the past three years, to restructuring and capital projects. Initiatives such as care map implementation, utilization management, performance measurement; quality assurance and others have been discussed but have not been fully implemented. Progress in these areas has been slowed, while other issues have been the focus of attention. Lately, there has been improvement with this regard. The April 23, 2002 minutes note that a significant number of risk issues have been identified as part of the Operational Review. A Vice President is identified as being responsible for implementing a strategy for a new charting system, and the CEO emphasizes that the hospital must be more aggressive in dealing with these issues.

The Senior Management team may also have difficulty prioritizing and acting on initiatives due to a lack of strategic information related to clinical programs and other departments. The fact that clinical, statistical and financial data is not incorporated into regular reporting at the senior table is concerning. The lack of a reliable nursing workload measurement system is unacceptable, given that nursing comprises the major portion of the hospital labour budget, and the fact that the MoHLTC mandated the implementation of nursing workload systems several years ago. Workload data would allow front line managers to more accurately assess their unit workload and plan staffing needs accordingly.

The consultants found a high level of commitment to the organization on the part of the Senior Management team. There is little question that they care about the organization, its staff and the patients they serve. However, the Senior Management team exhibited a lack of the abilities to think strategically and to implement initiatives effectively.

RECOMMENDATIONS

50. Re-examine current expectations and requirements of the Senior Management team related to decision-making and accountability. Review current position descriptions and revise where necessary. Concurrently, review current middle level management with a view to increasing the level of accountability of Directors.
51. Ensure that all levels of management are given the mandate/authority to make the appropriate level of decisions, at the right time, and be held accountable for these decisions. HRSRH may wish to implement a leadership educational program to further develop the skills and abilities of its management team.
52. The organization as a whole, and in particular, the Vice Presidents need to be vigilant in proactively dealing with complex situations which require their intervention. An example of such a situation include working with physician leaders to address the utilization of hospital resources and staff.
53. The Senior Management team needs to prioritize its initiatives and create implementation plans that outline responsibility for the initiative, mandate, and timelines for completion. The team may wish to develop a structured process to ensure that when decisions are made, there is regular, ongoing follow-up at senior management meetings. A more rigorous approach to "Business Arising from the Minutes" may facilitate this requirement.
54. Senior Management should develop consistent financial and statistical reporting requirements to meet the requirements of the Board and HRSRH at large. In conjunction with Finance, a structured approach needs to be established in order to provide all levels of management with relevant information, which will subsequently serve as the basis for more effective decision making within HRSRH.
55. Upon establishment of the requirements, the Vice-Presidents should collaborate with the Administrative and Medical Program Directors, Department Heads, Decision Support, Finance and Human Resources to establish portfolio-specific information requirements. These must be consistent with the broader organizational framework. Efforts should also be directed towards identifying the nature and frequency with which the necessary data will be circulated and analyzed.
56. Monthly, detailed variance reports and action plans to resolve over-budget situations should be submitted to Administrative Directors, and should subsequently be summarized for the relevant Vice President. Quarterly reports should also be prepared by each Vice President and reported at regular Senior Management meetings.
57. Managers, Directors, and Vice Presidents should be accountable for their budgets and should be responsible for ensuring that their budgets are not exceeded. Each level of the organization should be accountable for this and responsible for managing within budget.
58. Immediately assign the Vice President and Chief Nursing Officer responsibility for successfully implementing nursing workload measurement systems. The hospital should aim to implement a fully functioning, reliable tool within twelve to eighteen months.

EXTERNAL RELATIONSHIPS AND COMMUNICATION

HRSRH has had difficulties establishing strong relationships and communicating with its external partners. Given the many other issues facing the hospital, limited attention has been paid to developing effective partnerships with other health care organizations. For example, it is widely recognized that HRSRH did not have an effective relationship with the Community Care Access Centre (CCAC). However, efforts have been made recently to remedy this situation. As well, while HRSRH and the Northeastern Mental Health Centre (NEMHC) share some important clinical programs, there is still more to be done to maximize this partnership. The lack of one key contact representing HRSRH combined with other turmoil at Senior Management has contributed to ineffective clinical linkages with external partners. The lack of a strong clinical Vice President, until recently, has also affected these relationships. Minutes of Senior Management meetings in the past eighteen months indicate that limited discussion regarding external partnerships has occurred.

HRSRH has good relationships with the community. However, there will be intense pressures on the community to raise the funds required for the capital project. Relationships with external partners will be increasingly required for financial and other support. The positive relationship with Laurentian University is also noted.

Throughout the operational review process, the consultants observed effective internal organizational communication. External communication and partnerships are seen as areas for improvement.

RECOMMENDATIONS

59. HRSRH should focus on developing and maintaining external relationships with care partners in the Sudbury area and with the MoHLTC. The need to strategically address these issues at the senior level should be recognized and members of the senior team should be assigned to develop and maintain effective relationships with key partners.

CAPACITY TO IMPLEMENT CHANGE

The extent of change required in response to this Operational Review will be dramatic. Changes will be difficult and complex and will require consistent communication and political will to accomplish successfully. Most importantly, organizational change will require strong, committed leadership. HRSRH will need a Senior Management team with experience, skills and a willingness to change. It is the view of the consultants that unless the focus of the senior team changes with conscious, dedicated effort, the change will be slow. This report should serve as the impetus for developing a new and responsive organization that is single-minded in implementing systems and processes that will support the ongoing efficient use of resources in all areas of the hospital.

The lack of a structure to address regular issues that confront the hospital (such as yearly budgeting, Operating Plan submissions, seasonal bed closures etc.) has contributed to the inability of the organization to institute the necessary changes. For example, senior management minutes of February 19, 2002 indicate that a detailed budget process is being developed. Fundamentally, the budget process should be developed much earlier in the fiscal year.

The consultants also noted that throughout the Operational Review a number of key issues were identified. Examples include concerns related to the lack of workload measurement systems, utilization management deficiencies, documentation gaps, inadequate care maps etc. It appears from the minutes of senior management team meetings that there has been limited discussion or decisions made with regard to these issues despite the fact that concerns had been raised at Operational Review Steering Committee meetings in February and March 2002. There has been discussion related to chart documentation (April 23, 2002 and May 15, 2002), but there are many remaining outstanding issues that have yet to be addressed. The need for comprehensive discussion, prioritization and decision-making will be imperative if HRSRH is to successfully meet the financial and operational challenges.

RECOMMENDATIONS

60. The CEO should immediately evaluate the skill mix and capacity of the full Senior Management team to implement the fundamental changes that will be required to respond to the findings of the Operational Review and to successfully complete the capital project. As suggested in Chapter 4, the CEO should report her findings to the Board in January 2003.
61. Establish a yearly "calendar" which identifies key requirements with specific timelines for such items as budget development, Operating Plan submission, annual general meetings etc. The agenda of Senior Management meetings should be tailored to ensure that these matters are addressed in a timely fashion, and that adequate time is devoted to a full and complete process.
62. Develop a list of all recommendations from the Operational Review and establish a timeline for implementing the required changes. Individuals should be identified as being primarily responsible for each initiative, and the list should be reviewed on a monthly basis with a view to monitoring ongoing progress.
63. HRSRH should develop and implement an education program aimed at enhancing the administrative and leadership skill sets of Managers, Directors and Vice Presidents.

SUMMARY

Despite the efforts of Senior Management team to implement hospital-wide initiatives and build HRSRH programs, there remain some questions as to whether or not the current team can effectively lead the organization by making difficult decisions and implementing important projects.

Since the start of the Recovery Plan process, the consultants have observed significant improvement on the part of some Senior Managers with respect to their ability to recognize the need for dramatic change. The CEO also understands her role in ensuring that the appropriate measures must be taken, many of which will be difficult for the organization and the community. It will be imperative that the entire senior team (as well, all staff and physicians of HRSRH) understand that the status quo will not be acceptable, and that deep fundamental change is essential if the organization is to successfully address the challenges confronting HRSRH.

6. MEDICAL STAFF REVIEW

INTRODUCTION

HRSRH's 246 medical staff are organized into the following fifteen (15) departments and associated services:

- Anaesthesia and Critical Care
    - Service of Anaesthesia
    - Service of Critical Care
- Cardiovascular
    - Service of Cardiology
    - Service of Cardiac and Vascular Surgery
- Diagnostic Imaging
    - Service of Radiology
    - Service of Nuclear Medicine
- Emergency Medicine
- General/Family Practice
- General Surgery
- Laboratory Medicine and Pathology
- Medicine
    - Services of General Internal Medicine, Respirology, Haematology, Gastroenterology, Rheumatology, Infectious Diseases, Endocrinology
    - Service of Nephrology
    - Service of Rehabilitation Medicine
- Neurosciences
    - Service of Neurology
    - Service of Neurosurgery
- Obstetrics/Gynaecology

  - Service of Midwifery

- Oncology
- Orthopaedic Surgery
- Paediatrics
- Psychiatry
- Surgical Subspecialties

  - Service of Dental Surgery
  - Service of Ophthalmology
  - Service of Otorhinolaryngology
  - Service of Plastic Surgery
  - Service of Thoracic Surgery
  - Service of Urology

All departments have a Chief who serves on the Medical Advisory Committee (MAC). A Head of Service leads services within each department. As well, there are three Medical Program Directors for the following large complex acute care programs:

- Surgical;
- Medical; and
- Critical Care.

The Critical Care program also includes emergency, ICU and trauma services. These Medical Program Directors are responsible for working with hospital administration for the management of the hospital's programs and services.

The other three clinical programs (Family and Child, Continuing Care Program, and Clinical Diagnostics Program) each had a Medical Program Director up until this past year. Front line physician leader roles have currently been put in place. The change reflects the unique needs and input of the programs. The Administrative Director of Family and Child have developed a working relationship with the Chief of OBS, Chief of Paediatrics and NICU Director. When specific strategic Medical Program Director input is required, either the surgical or critical care Medical Program Director gives direction. The Continuing Care Program has

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Nomenclature Note: Medical Program Director vs. Other Physician Leader Positions
Medical Program Directors are strategic upper management positions for the programs. Each of the three key acute care programs has a medical program director who together with the administrative program director co-directs the clinical program with full fiscal and performance accountability for the program. *Physician Leader Positions* are found within a program. These are front line physician managers, who usually provide a half day to one day per week of administrative time to their particular service within a program. At times they are referred to as medical directors, but are not medical program directors.

specific physician leaders for these services: Rehabilitation Medical Director, Geriatric Medical Director and Palliative Medical Director. The Clinical Diagnostics Program is an evolving program. The VP of Clinical Services and Program Administrative Director are forging a changing accountability framework for two of the medical diagnostic services: 1. Laboratory Program has a Medical Director with quality and licensing responsibilities for laboratory; role review and accountability and reporting relationship is a dynamic process that is evolving; and 2. Diagnostic Imaging's Administrative Director has a strategic working relationship with the Chief of Radiology.

HRSRH also has a Utilization Medical Director, who has led hospital efforts to develop a bed utilization plan during this complicated transition from a multi-site facility. Effective summer 2002, the programs (under the leadership of their medical and administrative program directors) are to be responsible for effective bed utilization within their respective programs.

There is an Infection Control Officer (a physician) who is a specialist in infectious disease who provides strategic advice on infection control issues for the hospital.

The remaining program clusters (Clinical Diagnostics, Human Resources & Support Services, Communications & Government Relations, Finance, Capital Planning, Continuing Care, and Family and Child) are managed by Administrative Directors.

HRSRH has committed to a review of Program Management at the two to three year mark, which is currently underway.

The Directors (both medical and administrative) of each program along with the Chief of Staff and Chief Nursing Officer comprise the HRSRH's Inter-Program Council (IPC). The IPC is responsible for planning, coordinating and integrating the strategic activities, systems and processes across the organization. The IPC also provides leadership in implementing and communicating the vision of the HRSRH within each program.

Each of the 10 program clusters has a program council. These councils are multidisciplinary and include all medical and non-medical service leaders within the program. The program councils are mainly responsible for identifying, reviewing, resolving and making recommendations pertaining to quality, risk, utilization and delivery of services.

The Medical Advisory Committee (MAC) is composed of 20 members. Membership includes Chief of Staff (who is also the Chair), 10 Chiefs of Departments, the President of the Medical Staff, the Vice President of the Medical Staff, Secretary Treasurer of the Medical Staff, the Chief Executive Officer (without voting privileges) and Chief Nursing Officer (without voting privileges)[1]. These members all regularly attend MAC meetings. Also attending MAC meetings are Heads of Services, Program Medical Directors and Medical Directors. These representatives may attend MAC meetings although generally they do not attend.

Core MAC accountabilities include[2]:

- ensuring an effective medical quality assurance process
- ensuring credentialing of physicians
- developing a physician manpower plan
- ensuring effective delivery of medical care
- providing strategic direction related to:
  - utilization issues
  - clinical efficiency indicators
  - program improvement [illegible]
- providing advice and direction to PPC on delivery of care and
- addressing and resolving program direction issues

Medical staff bylaws stipulate that MAC must have at least 10 monthly meetings each year and keep minutes of these meetings.

MAC also has a committee structure in place to ensure appropriate representation of medical issues for all programs and services. Committees of the MAC are listed below:

- Credentials Committee
- Medical Quality Assurance Committee
- Pharmacy & Therapeutics Committee
- Medical Equipment Committee
- Medical Records Committee
- Research Ethics Committee (Board and MAC)
- Utilization Committee (moving this to Utilization Council)
- Medical Education/ Primary/ Post Grad Committee (moving this to Education Council)

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[1] According to the Medical Staff Bylaws [illegible], the Chair of the Board, or designate, is also a member of MAC without voting privileges. Currently the Chair of the Board is not listed as a member of MAC.
[2] [illegible] Program Management Structure, [illegible]

- [illegible]

[illegible]

- Critical Care Program
    - [illegible] Committee
    - [illegible] Committee
    - [illegible] Committee
- Surgical Program
    - [illegible] Committee
    - [illegible] Committee
    - [illegible] Committee
    - [illegible] Committee
    - [illegible] Committee
- Medical Program
    - [illegible] Committee
- Family Child Program
    - [illegible] Committee
    - [illegible] Committee

The MAC annually approves the medical members of all Medical Staff Committees. [illegible]

MAC designates [illegible] Committee [illegible]. [illegible] Medical Staff [illegible].

The Chief of Staff is appointed by the Board [illegible] MAC [illegible] Committee. [illegible]

Chiefs of Departments are appointed by the Board with advice from the MAC. Duties of the Chiefs include ensuring the provision of professional care, organizing and implementing a quality assurance program, ensuring the provision of quality care, ensuring appropriate utilization of resources, recommending manpower needs and reviewing privileges of physicians.

Some departments are divided into services. Heads of Services are appointed by the Board on the advice from the MAC, after consideration of the Chief of the Department's recommendations and after receiving input from other members of the Service. The Head of Service is responsible to the Chief of the Department for the quality of medical care rendered to patients in that service.

CONTEXT

The process of bringing together the medical staff of the legacy hospitals under a single HRSRH medical staff structure began in 1997. The four (4) medical staffs from the Laurentian, Memorial, Sudbury General and Algoma sites met on several occasions between April and June 1997. The medical staff voted in favour of establishing a single site and a governing body for the new corporation. In June 1997, the medical staff elected a President, Vice President and a Secretary for the Executive of the medical staff. The HRSRH's transition Board invited the President to join its membership as a representative of the medical staff. A Chief of Staff Selection Committee was formed and membership included the President and the Vice President of the Medical Staff.

The virtual MAC, comprised of the Chief of Staff, Vice President, Secretary and Department leaders from each legacy hospital, engaged in discussions between September and October 1997 to establish the new medical staff structure. The 28 departments from the legacy hospitals were amalgamated into 13 departments. This culminated in the MAC structure that also serves as the current structure, comprised of 23 members, as discussed above.

OBJECTIVES

Specific objectives of the medical staff review were to:

- evaluate the capacity of the medical staff leadership (MAC, MAC committees, IPC, Program Medical Directors, Medical Directors, Chiefs of Departments, Heads of Services and the Medical Staff Association) to fulfill its role and responsibilities, identify issues and be proactive in developing solutions; and
- identify areas for improvement and recommend strategies to ensure delivery of quality medical care, improved efficiencies, an effective structure for medical staff leadership, and effective management of medical programs and services.

COMPONENTS OF THE REVIEW

The medical staff review comprised the following steps:

Phase I: Initial data collection and review
Phase II: Detailed interviews and focus groups
Phase III: Analysis and synthesis
Phase IV: Final Report

Phase I involved the review of documentation and other information relevant to the medical staff, provided by HRSRH. Phase II involved detailed interviews and focus groups with medical staff on the operations and quality of care provided.

Phase III involved the analysis and synthesis of all the information collected through the interviews, focus groups and documentation. This material was presented to the Steering Committee on April 11, 2002. This committee played an important role in providing feedback to the draft findings and recommendations presented by the consultants. Phase IV entailed the development of this section of the report, building on the feedback received, and additional information. This chapter identifies the medical staff's strengths as well as opportunities for improvement in the administration of medical programs and quality of care provided.

DOCUMENTATION REVIEWED

The consultants reviewed relevant HRSRH documentation and information related to specific areas including:

- MAC minutes

- medical staff by-laws;
- Alternative Payment Plans (APP);
- stipends;
- staff recruitment and retention strategies;
- quality; and
- utilization.

The information was reviewed by the consultants and used to inform the detailed interviews and focus groups with the medical staff and leadership.

INTERVIEW DESIGN AND IMPLEMENTATION

Interviews were conducted with medical staff leadership. These interviews were held in February and March 2002 and were generally 1 hour in length. The following is a list of the positions of those people interviewed for this review:

- Program Medical Director, Surgical
- Program Medical Director, Critical Care
- Program Medical Director, Medicine
- Chair of the Medical Capital Equipment Committee
- President of the Medical Staff Association
- Vice-President of the Medical Staff Association
- Chair of the MAC
- Chair of the Medical Quality Assurance Committee
- Chair of the Utilization Management Committee
- Past Chief of Family Practice
- Three (3) physicians who had resigned their privileges
- Co-Chair of the Physician Services Committee of the Ontario Medical Association
- Leaders of the hospitalist program

Focus group sessions were conducted with various medical representatives in March 2002 and were generally 1 to 2 hours in length. The following is a list of the program and service areas represented in the focus group sessions:

- Family Child/Obstetrics/Paediatrics Program
- Rehabilitation and Continuing Care
- Oncology
- Laboratory and Diagnostic Imaging
- Psychiatry
- Medical Program
- Surgical Program
- Anaesthesia/Critical Care
- Emergency Department
- Trauma
- Cardiology/Vascular Surgery

The key areas for investigation in the interviews and focus groups are listed below:

- strengths and opportunities for improvement in all areas relevant to the medical staff and clinical programs
- medical staff leadership (MAC, MAC committees, IPC, Program Medical Directors, Medical Directors and Medical Staff Association)
- HRSRH Program Management Structure
- quality of care for clients
- utilization
- clinical issues and practices
- medical staff morale and satisfaction
- medical staff recruitment and retention
- Alternative Payment Plans (APPs)
- medical school
- credentialing of physicians
- communication and information provision
- administrative and accountability processes

FINDINGS AND RECOMMENDATIONS

Major themes emerged from the interviews and focus group sessions. There is universal agreement from the medical staff and leadership that one site will address many of the issues confronting physicians at HRSRH. Physicians interviewed strongly expressed the view that the one site model will positively affect physician recruitment and retention, and will result in numerous efficiencies with respect to utilization and physician practice patterns.

Physicians in general are committed to the hospital and to building collaborative relationships. The lack of a cohesive HRSRH culture was noted by many of the physicians interviewed. Recently (in the past year), there has been some improvement, and processes and systems are increasingly being developed to address issues of concern to the HRSRH physicians.

STRENGTHS

The medical staff is a strong and cohesive group committed to working hard and collaboratively to solve problems and make the system work. They worked effectively and strategically throughout the amalgamation process to achieve a single medical staff across all sites with a single leadership. Physicians have been vocal yet constructive and the Medical Staff Association has been instrumental in this process.

There is a real desire among the medical staff to work collaboratively with the administration. The majority of physicians indicated that they enjoyed a positive and supportive working relationship with the CEO and Chief of Staff. However, when asked about the relationship with the Board, comments were often less definitive. Other than the Chief of Staff and the President and Vice President of the Medical Staff, physicians appeared to have little involvement with the Board, and lacked an appreciation for the role of the Board in the governance of the organization.

Various initiatives undertaken are demonstrative of the proactive nature of the medical staff group. Medical staff leadership was successful in implementing the role of hospitalists in response to the high number of "orphan" patients in the system. Despite some initial organizational concerns, this program appears to be extremely effective, and while further improvements are undoubtedly possible (decreasing LOS, implementing consistent approaches to care etc.) the hospital is to be commended for its innovative work in this regard. Several physician groups indicated that they have established successful outreach clinics to the network and where appropriate the northeast. Recent efforts have been made to improve efficiency (e.g. suture standardization). Different models of care are being explored, reflecting a commitment to develop innovative solutions. For example, the Urology Service shares alternative weekend coverage with North Bay, and the Anaesthesia department is exploring the possibility of establishing a comprehensive pain programme throughout HRSRH. However, many initiatives have yet to be implemented.

There is general optimism regarding the medical school scheduled for opening in 2004. The appointment of Dr. Aberman as Acting Dean, as well as the recent appointment of the permanent Dean are viewed as very positive steps that will increase the likelihood of successfully realizing the timelines associated with this opportunity.

A successful recruitment strategy implemented in 2001 resulted in a net gain of 15 physicians. Currently, 12 new physicians have committed to relocate to Sudbury as training completes this year. Recruitment and retention is a significant issue for HRSRH and there is a need to develop sustainable and long-term strategies to avoid human resource crises. This is further discussed below in the Recruitment and Retention section.

The HRSRH instituted Interim Physician Stipends in June 2000 as a temporary bridge measure in response to the escalating physician crisis. The annualized cost of the HRSRH's stipends was $5,592,000 for 2000/2001 as compared to the annualized cost of $6,087,658 for the MoHLTC's incentives for 2001/2002. Exhibit 9 includes specific new MoHLTC funding strategies.

Exhibit 9: 2001/2002 Fiscal Year Cost for MoHLTC Incentives

1. HOCC	$902,958
2. Targeted Incentive Fund	$1,500,000
3. Northern Retention Initiative (estimated value for HRSRH) -assumes 214 MDs x $9500 per year (if approximately 47plus MDs without hospital privileges were on staff there would be another $446,500 value)	$2,033,000 $446,500
4. ER APP	$600,000
5. ICU Interim APP	$605,200
TOTAL	**$6,087,658**

1. HOCC – Hospital On-Call Stipend

This is an OMA fee for service contract, which began in September 2000. Each hospital receives a stipend through the OMA to cover on call.

2. Targeted Incentive Fund

This is a one-time fund for a one-year period (April 2001 – March 2002). The hospital has asked for this fund to be continued. Funding is allocated to compensate physicians for additional responsibilities associated with operating on multiple sites.

3. Northern Retention Initiative

This is an OMA contract. The initiative was announced in April 2000 and implemented in July 2001. The objective was to support the redistribution of physicians to northern areas. Qualifying physicians who have worked for more than 4 years in a hospital in the north are given $9500 per year, up to a maximum of three calendar years. The MoHLTC has allocated these funds specifically for physicians who have worked in hospitals in the north. However, as approximately 47 Sudbury area physicians have chosen not have hospital privileges, an estimate of the MoHLTC incentive value if they had hospital privileges would be $446,500. This is above the estimated $2,033,000 of the value of the northern retention initiative for the 200 plus Sudbury physicians with hospital privileges.

4. ER Alternative Payment Plan (APP)

The APPs replace fee for service with an hourly rate payment structure. These are new MoHLTC dollars that result in increased compensation for physicians. Hourly rates vary depending upon the hospital's volume of ER patient activity. HRSRH physicians receive a high volume rate of $162/hour.

5. Interim APP

A bridge interim solution in addition to the fee for service compensation was developed pending negotiation of a permanent APP. This was in response to an emergency in September 2001 when ICU physicians withdrew service for four (4) days.

Interim APPs are in place for Paediatrics and Critical Care. The AFA for the Emergency physicians was fully implemented on April 1, 2002. A letter of intent indicating a commitment to negotiate a deal with the neurosurgeons has also been signed. These efforts have temporarily addressed the physicians' concerns. The hospital has been successful in identifying crisis situations related to medical staffing, and as a result has been able to develop and establish mechanisms to mitigate these significant issues. HRSRH physician staff groups are expressing increasing interest in APP's, and coordinated dialogue between these groups and the Physician Services Committee is ongoing.

HRSRH has made important strides in service provision. For example, waiting lists for diagnostic tests particularly related to MR and CT, indicate that the hospital has one of the better waiting lists in Ontario. HRSRH is currently in a unique position in Ontario in that it is a tertiary referral centre that is not a fully active teaching facility. While it is understood that this will change with the opening of the northern medical school, it is nevertheless an important factor to consider in future planning. For many of the current cadre of physicians it was a significant attraction that they would be able to practice in a tertiary centre without additional research and teaching requirements.

The Medical Capital Allocation process is effective and is based on consistency and trustworthiness.

The Medical Quality Assurance Committee has developed standards re: mortality and morbidity, however these initiatives need to be fully supported by all Chiefs.

Programmatic Management is evolving – six major clinical programs are now in place (Medicine, Surgery, Critical Care, Clinical Diagnostics, Family and Child and, Continuing Care). Of these programs, three (Medicine, Surgery and Critical Care) have a Medical Program Director working in collaboration with an Administrative Director. However, the hospital appears committed to involving physicians in the key clinical, administrative and financial decisions.

RECOMMENDATIONS

64. Develop a consistent approach to Alternative Payment Plans (APPs). While the hospital is to be commended for its success in the development of APPs, which are viewed very positively by those included, there are concerns about the lack of a defined framework to guide the development of such. The objective to implement APPs should be clear in terms of an overall strategy for recruitment and retention. This strategy should, ideally be guided by a comprehensive organizational strategic plan. The process for negotiating APPs should be clear, fair and transparent. The MoHLTC needs to clearly identify as a priority an effective process that allows interested physician groups to negotiate APPs in a timely manner. As well, the current practice of HRSRH bridging APPs should be revisited.

UTILIZATION MANAGEMENT

Utilization Management is a critical issue for any hospital. Effective utilization of hospital resources is driven largely by physician practice, and as such necessitates a high level of involvement of physicians in key utilization decisions and practices. The need for reliable data (clinical, financial and statistical) to support these decisions therefore becomes critical. HRSRH physicians expressed a desire to improve the accuracy and comprehensiveness of documentation to ensure high quality clinical data. Some physicians demonstrated a good understanding of the impact of documentation on coding practices. However, in interviews and focus groups there was little discussion with respect to the need for effective utilization management practices. It became apparent throughout the course of the operational review that there was a lack of dedicated resources to address utilization issues.

As noted above, there is a Utilization Committee which reports to the MAC; however, the Chair of this Committee does not currently sit on the MAC. It was also noted that the Chief of Staff, while extremely committed to quality initiatives, is less involved in utilization issues.

While the data is becoming increasingly reliable, and systems are being established to address key utilization issues such as implementing benchmark clinical pathways, adhering to expected day of discharge (EDD) and identifying high risk patients more proactively etc, a key question lingers for the medical staff. Who is responsible to monitor physician utilization patterns? Is it the Medical Program Director or the Department Chief?

The lack of effective discharge management is a matter of significant concern. Specifically, the organization lacks processes related to ALC definition and EDD identification. There is a lack of clinical personnel (Case Managers) to assist in ensuring the effective utilization of hospital resources. Timely discharges have also been hindered by the hospital's limited efforts to partner with the CCAC.

RECOMMENDATIONS

65. There are efficiencies to be garnered by the hospital through a strong commitment by the administration and medical staff to implement utilization management strategies. A significant degree of work needs to be accomplished in the area of utilization management.
66. Effective organizations ensure that benchmarked clinical utilization data is shared with programs and physicians on a quarterly basis. As well, this information serves as part of the credentialing process.

    Specific strategies are listed below:

    - Clearly define who is responsible for overseeing physician utilization patterns and develop mechanisms to report on such.
    - Implement an effective date of discharge program.
    - Obtain physician buy-in to improve utilization.
    - Educate the medical staff with respect to the importance of documentation and the resulting impact on the LOS, EDD, CMG, RIW and hospital funding.
    - Review mandate of the Utilization Management Committee and ensure that the Chair also sits on MAC and provides regular written reports.
    - In collaboration with medical staff, establish a strong definition of ALC and ensure that this is well understood and implemented.
    - Further detailed recommendations relating to effective hospital utilization management care are discussed in Chapter 9.

PRESSURES ON THE PROVISION OF MEDICAL CARE

Stakeholders expressed significant concern regarding the fragmentation of care provided. Approximately two-thirds of HRSRH's patients are cared for by family physicians. However, over one half of family doctors in the Sudbury area do not hold hospital privileges[7]. Additionally, the "best" guess for the population not served in the Greater City of Sudbury by a family doctor is 25, 520[8]. Although the hospital has hired hospitalists to address this problem and to care for orphan patients, there continue to be inefficiencies related to timely intervention and extended LOS. Leadership of the hospitalist model has been a concern in the past. Recently there have been significant improvements in the administration and oversight of the program, and the current co-leaders are to be commended for the improvements they have spearheaded in this important program. The role of the Nurse Practitioner remains a matter of some concern and warrants further examination and analysis.

The admissionist model was adopted in December 2001 in response to a crisis with the Emergency Department medical staff and their workload. Admissionists were engaged to admit those patients requiring an inpatient bed, and to complete admission histories and physicals, as well as orders. This then freed up the ED physicians to provide care to other patients in the ED. It is important to consider that while this model is far from perfect it does serve a purpose in the unique Sudbury environment. The fact that admissionists complete these requirements makes the role of the already stretched hospitalists considerably easier. It has also contributed to a happier group of ED physicians, which given the events of the past, should not be taken lightly. However, it is the opinion of the consultants that the admissionist role further contributes to the fragmentation of patient care, and may not be a viable long-term solution. The impact of the lack of internists to support the delivery of care to patients in the ED is recognized.

While care maps have been developed in some areas, their impact on supporting the provision of high quality patient care based on current best practices is minimized due to inconsistent efforts to adopt these tools. As well, review of the care maps under development revealed a lack of attention to current best practice, particularly with regard to LOS standards. Physicians' normal practice patterns were generally accepted, and there appeared to be little attention paid to current accepted practice patterns.

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[7] Chief of Staff

[8] Algoma, Cochrane, Manitoulin and Sudbury (ACMS) District Health Council (DHC). The figure is based on the Under-serviced Area Program's List of Areas Designated as Under-serviced for General/Family Practitioners, for April, May, June 2002. It is assumed that there are 1,380 patients per physician.

RECOMMENDATIONS

67. Assess the efficacy of the hospitalists and admissionists on an ongoing basis and report on a regular basis to the MAC. Develop clear standards and criteria for ongoing evaluation of these roles. In particular, review the role of admissionists in the Emergency Department.
68. Emergency Department staff should monitor the impact of lack of general medicine coverage on the provision of care in the department. Once data has been collected and analyzed, the findings should be shared with the MAC and then communicated appropriately beyond the MAC to senior management and the Board if necessary. Findings should be incorporated into the medical human resource plan. This plan is discussed below under the Recruitment and Retention section.
69. Hire case managers to help address the fragmentation of care provided to patients. Case managers would oversee the delivery of patient care while working collaboratively with the clinical staff to ensure appropriate planning and use of resources.
70. Implement care maps which are based on best practices and nationally recognized standards of practice. Efforts should include educating the staff and monitoring the application of care maps.

RECRUITMENT AND RETENTION

Recruitment and retention has been a significant issue. Challenges to recruiting physicians is an issue faced by many hospitals in the northern and rural areas across the province. However, the high rate of turnover of physicians at HRSRH is unique, resulting in numerous crises. Some of the physicians interviewed were demoralized. Concerns included frequency of call and the current condition of the facilities within which they practise. The HRSRH:

- suffered a loss of 15 physicians (mostly specialists) between January 1999 to May 2000;
- had a net gain of 17 physicians between January 2001 to September 2001; and
- has commitment from 12 new physicians to relocate to Sudbury as training completes this year (between February 2002 to September 2002).

Disjointed and opportunistic physician recruitment planning efforts have been steered by individual physicians' desires and demands, instead of clear strategic direction and criteria related to population needs and the responsibilities of the hospital to fulfill its role in the provision of primary, secondary and tertiary care.

During the course of the operational review, the consultants did not specifically address the detailed service requirements for each clinical program. However, population based analysis suggests that:

- for overall acute and day surgery services, the community volumes are in line with the provincial experience given the demographics, socio-economic and other health needs indicators; and

- tertiary procedure volumes are higher than the provincial experience given the demographics.

The consultants did not conclude that tertiary volumes are too high. They did conclude that the communities are not under-serviced for the examined tertiary procedures.

Concern was expressed regarding the lack of stability in the Senior Management team. There has been significant shuffling of the administrative Directors, which has impacted many of the physicians directly. As well, the lack of stability in the CEO position was also identified as an area of concern.

It is also important to note that all physicians expressed a belief that a single site was imperative for the effective delivery of acute care services.

RECOMMENDATIONS

71. Develop a comprehensive medical human resources plan, which is congruent with the organization's strategic directions. Ensure that recruitment efforts are strategic, and are based on the required needs of the populations served as well as the hospital's mandate to fulfill its defined role.

ROLE DEFINITION

The MAC is a large and cumbersome committee (31 members). The group sees its responsibilities as including credentialing, manpower planning and medical quality assurance. A key responsibility of the MAC is to advise the Board on these matters. However, review of Board minutes indicates little discussion regarding quality of care and credentialing. The emphasis has clearly been placed on recruitment activities. However, the consultants are of the opinion that there is an appropriate credentialing process in place at HRSRH. As stated earlier, one concern relates to the level of understanding on the part of Board members as to their role in overseeing the credentialing process. Additionally, the review of MAC minutes and comments made by some physicians indicate that the decision-making capacity of the MAC is questionable. While MAC functioning has improved recently, evaluation of its function is still evolving. An evaluation tool was developed in 2000, and was subsequently revised in 2001. The new tool is much more directive and has been more effective in terms of identifying key issues which require attention.

The relationship between the MAC and the Board is generally positive. Board members are welcome at MAC meetings, and Board members respect the opinions of the medical staff representatives. Board members review the minutes of the MAC and its respective committees, but at the time of the review, a formal reporting mechanism summarizing key decisions taken by the MAC on a regular basis was not in place. The practice has

[illegible]

RECOMMENDATIONS

[illegible]

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- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

OPPORTUNITIES BY PROGRAM

[illegible]

[illegible]

FAMILY PRACTICE

[illegible]

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]

REHABILITATION AND CONTINUING CARE

[illegible]

[illegible]

[illegible]

RADIOLOGY

Coverage at three sites is extremely problematic with no electronic systems for film viewing, storage and transfer. The eight radiologists find it difficult to cover the three sites as not all individuals are able to cover differing radiology modalities. Radiologists are also currently concerned about the potential loss of technical fees. Additionally, new equipment is required in order to provide the appropriate level of service.

VASCULAR SURGERY

The future of the endovascular stenting program is unknown. Thirty two stents have been completed in the last 18 months. The program intends to apply for volume/program funding. The costs of materials used to date have not been funded. There was no indication that there has been any evaluation of the impact of stenting on inpatient LOS and utilization.

SURGERY

There are major concerns related to manpower shortages (neurosurgery and urology). The vascular and thoracic surgical shortage has been resolved. It is unclear why the hospital has allowed some aspects of the program (vascular) to expand, but is unable to support its Trauma Program and its mandate to serve North Eastern Ontario.

While the consultants did not examine the efficiency of the operating rooms in great detail, it is apparent that the allocation of operating room blocks is an issue that requires further examination.

ORTHOPAEDICS

The orthopaedic surgeons have not fully supported the regional trauma program. Scheduled orthopaedic cases from Manitoulin Island are being transferred to Toronto and the emergent/difficult high acute care cases tend to be looked after in Sudbury. The surgeons would prefer to manage all aspects of care.

MEDICAL PROGRAM

The focus group reported difficulties in achieving significant changes in their length of stay. Efforts to identify ALC patients were hampered in the past by urging a co-payment for ALC designated patients. Physicians were reluctant to classify patients as ALC in the event that this would cause their patients undue financial pressures.

CRITICAL CARE PROGRAM

The role of the intensivists varies from site to site. Additionally, there is a need for explicit admission and discharge criteria in all critical care areas.

TRAUMA PROGRAM

The program adheres to a "no refusal" policy for all trauma patients from District 11 (Sudbury and Manitoulin) 24hours per day 7 days per week. However, patients from the Muskoka area and North Eastern Ontario are transferred to various hospitals in Toronto due to gaps in neurosurgery, orthopaedic surgery and plastic surgery. Medical staff leadership assured that physicians would fulfill their duties to fulfil the hospital's role in covering trauma. If this involves working during the nights, then the physicians would also like to cover during the days.

Last fall, all doctors in the Emergency Department had stopped accepting responsibility as Trauma Team Leader. However, the new Medical Director in the Department has resolved the issues.

EMERGENCY DEPARTMENT

There has been a recent change in the leadership of the Emergency Department and physicians are pleased with the AFA.

Physicians are frustrated with limited availability of specialists, e.g. Plastic Surgery, Internists, Ophthalmology and Psychiatry.

7. CAPITAL PROJECT REVIEW

INTRODUCTION

A critical component of the operational review was a complete and objective assessment of the HRSRH capital project within the context of the directions of the Health Services Restructuring Commission (HSRC). The HSRC direction for consolidation of services to one site was supported by financial, clinical and operational performance criteria. In addition, a one-site model has considerable advantages in terms of accessibility of services, timeliness of services, continuity of care, patient, community and staff satisfaction, as well as the ability to recruit and retain medical staff.

The review of the capital project had as its primary goals, an evaluation of the current state of the project, the management and outcomes of the project to date, as well as an evaluation of options for completing the project in a timely and efficient manner. This review, while comprehensive, was not intended to be a detailed accounting or audit of all aspects of the project. An assignment of that nature would require the consultants to review all tenders, contracts, change orders, results and other aspects of the project.

The scope of options for consideration was initially limited to a one-site model as directed by the HSRC and expected by the hospital and the community. Given the current status of the project, the amount already spent, the anticipated cost to complete, and concern regarding the community and MoHLTC capacity to fund a timely completion, two site models were also considered.

This chapter of the report is elaborated through the following key sections:

- a chronology of events and the current state of the capital project;
- an evaluation of the outcomes of the project including;
- an evaluation of management of the capital project;
- an evaluation of options for completing the capital project; and
- recommendations.

A CHRONOLOGY OF EVENTS AND THE CURRENT STATE

BRIEF SUMMARY OF THE CAPITAL PROJECT

In its directives on the restructuring of the Sudbury hospital system, the HSRC called for the consolidation of all hospital programs and services previously provided by the three Sudbury hospitals on one site. This required the expansion of the Laurentian site to accommodate the consolidated services. In March 2000, the HRSRH signed a Construction Management contract with PCL. The HRSRH Board, in mid 2001, approved the conversion to a Guaranteed Maximum Price approach to complete the capital project in two separate phases. Phase 1 would include approximately 45% of the total new construction and would encompass a south tower housing mostly inpatient units, and the power generation facilities. The existing main building (north tower) would be renovated as part of Phase 2. A multi-level link between the two towers would also be constructed as part of Phase 2. More on the content, area, and status of Phase 1 and 2 is provided later on in this chapter.

The Ministry of Health and Long Term Care (MoHLTC) approved a plan that called for the construction and/or renovation of a total of approximately 775,000 square feet although the Operational Review has identified a lack of clarity on this figure, which will be described later on in this chapter. The total number of beds (acute, complex continuing care, and rehabilitation) to be built was 575. Most diagnostic services, the Operating Rooms, Emergency Department (ED), and the majority of tertiary acute care services would be located in the newly constructed facility. At the beginning of the Operational Review, much of Phase 1 of the construction had been completed. Most of the high technology/high cost programs and services (including OR, ED, Laboratory, Diagnostic Imaging, etc.) are part of Phase 2 for which construction has not yet begun. A large proportion of the new inpatient units in Phase 1 are designed for complex continuing care.

In 1997, the HSRC estimated the cost of the required capital expansion at $84.6 million. Since then, costs have escalated considerably, and this estimate had risen to $209 million before the start of the current Operational Review. More recent estimates have identified an even higher total cost for the capital expansion.

CHRONOLOGY OF EVENTS

A chronology of key events (Exhibit 10) was assembled to provide an overview of the capital project processes.

Exhibit 10: Chronology of Events

Date	Event	Comments
1998 April 28	Final Functional Program (FP)	The submission to the MoHLTC had a capital value of $135.28 million.
1998 June 16	Revised Capital Cost Estimate	The capital cost estimate was revised to $131,621,246. This was put forward by the hospital with the assurance that while the capital dollar estimate was lower than had been submitted with the Functional Program (FP), the project would still meet the scope of service and functional requirements as set out in the FP.
1998 June 16	Minister's Approval	Approval of the capital project of $131.62 million, including allowance of Furnishings & Equipment (F&E) for $9.0 million. The Ministry's share was $88.34 million.
1999 April 30	Sketch Plan Report and associated costs	The project cost at this stage was estimated to be $147.516 million. Construction costs estimated by PCL were $121.206 million, which excluded ancillary project costs, but included PST.
1999 July	Construction Managdment Contact – First Draft	irst draft submitted by HRSRH to MoHLTC – legal review and discussions for the next 6 months.
2000 February	Liability Waiver	Board signs a waiver that sets out the terms and conditions for the Hospital's use of the Construction Management approach. This included the statement that, given this approach, the Board was willing to assume sole responsibility for financial risks and project costs which are beyond the approved MoHLTC's funding support.
2000 March	MoHLTC approval of construction management contract	The Board was advised that it would have to pay for everything over the MoHLTC's approved contribution. This was $92.14 million based on a project value of $143.4 million (see liability waiver comment above).
2000 March 7	MoHLTC approved capital cost increase to $143.4 million	The MoHLTC approved an increase for their share from $88.34 million to $92.14 million based on a total project cost of $143.4 million. This increase of $3.8 million was for 100% of the hospital's estimate of cost escalation through the time taken to finalize the construction contract documents. The community's share increased by $7.98 million, from $43.279 million to $51.26 million. There is no linkage with this announcement to the sketch plan submission.
2000 June 5	Board Committees advised of cost increase with respect to the curtain wall package	Building and Planning Committee raised specific concerns around cost increases due to changes in market conditions. The Executive Committee was also informed at this time about the potential fo r cost overruns associated with the capital project.
2000 June 28	HRSRH advised MoHLTC of cost increases	The CEO contacted the MoHLTC by telephone to advise them of the cost increase.
2000 July 14	HRSRH informs MoHLTC of estimated cost increase	Letter from HRSRH to MoHLTC advised of cost estimate of $167.88 million. Review of the Board minutes indicates that the Board was officially informed of the $20.0 million cost increase on September 5, 2000.
2002 May	Operational Review - Phase 1 & Phase 2 costs estimates provided by both Helyar and Marshall & Murray	Total 'Cost to Complete' estimated as $363 million to $366 million, including cost allowances recommended by HRSRH for items yet to be negotiated with MoHLTC. This total value, therefore, is not the amount that would, in usual circumstances, be 'eligible for funding' by MoHLTC.

CAPITAL PROJECT STATUS

The capital project consists of two phases, Phase 1 and Phase 2. The work completed to date includes:

- Set-up and preparation for the entire construction project (functional programming and design);
- Completion of approximately 45% of the construction (Phase 1), including:
    - complete construction of the interior of the South Tower. Portions of the exterior have been placed on hold pending a decision on the scope of Phase 2;
    - construction of Levels 0, 1 and 2 of the 'Link' between the South and North Towers (Main Tower). The space is a mixture of finished, unfinished and shelled in; and
    - complete construction of the new power plant with integrated co-generation plant.

Phase 1 construction includes ambulatory care and inpatient care, limited to Complex Continuing Care, Rehabilitation and Sub-Acute beds, and will be substantially complete by early fall 2002. Phase 2 includes additional acute inpatient and intensive care beds, operating rooms, the emergency department, and other diagnostic departments.

OUTCOMES OF THE CAPITAL PROJECT

OVERVIEW OF THE APPROACH TO PROJECT REVIEW

The review was undertaken using a combination of document review of historic and current capital project information, interviews with key representatives and analyses of findings. Additionally, the consultants worked with the Capital Project Working Group, which comprised of representatives from HRSRH and the MoHLTC. During the latter part of the assignment, the consultants worked closely with hospital staff, the architects and the hospital's cost consultants to derive costs associated with the completion of the capital project. Finally, the consultants also applied their many years of experience in health-related capital projects in Ontario to provide a comprehensive analysis. All findings were reported on a regular basis to the Steering Committee.

With the agreement of the Working Group and the MoHLTC, the following tasks were identified as being the key deliverables for this aspect of the review:

- Validation of Functional Program and Bed Capacity including
    - A review of HRSRH's workload as currently documented was compared to the current and projected workload as contained in the Functional Program;
    - A cataloguing of current and planned HRSRH beds by program/service as compared to levels directed by the MoHLTC post-HSRC.
    - A comparison of area programmed, planned/designed to that approved by the Ministry as well as an assessment of the components that would be ready for occupancy at the completion of Phase 1.
- Estimation of the cost to complete the project as well as an evaluation of variance of Phase 1 and total project cost as compared to the approved budget, and to prevailing market rates.

VALIDATION OF FUNCTIONAL PROGRAM AND BED CAPACITY

WORKLOAD ANALYSIS

In developing the Functional Program, a set of workload and activity indicators were used including:

- Actual statistical data from the three legacy hospitals for the 1996/97 fiscal year; and
- A forecast of the same statistical data for the 2003/04 fiscal years.

The indicators provide a cross section of activity across the main hospital departments and services and include such statistics as inpatient days, Emergency visits, diagnostic procedures and therapy attendance days. The 2000/01 actual volume statistics are well below both the 1996/97 actual figures and 2003/04 forecasts for the majority of acute activity indicators (Inpatient admissions, ER visits, ER admissions and Surgical cases). Patient activity volumes at HRSRH have either dropped or remained constant

Some specific observations include (See Appendix IV for a table providing the detailed workload statistics comparison):

- The indicators of post-acute activity (Continuing Care and Palliative days, Inpatient Rehab days) are well below the 2003/04 forecast.
- Ambulatory Care visit volumes in 2000/01 have exceeded the 2003/04 forecasts while total 2000/01 medical/surgical days are between the 1996/97 actuals and 2003/04 forecasts.

- Maternal and Newborn activity in 2000/01 is mostly in line with the 2003/04 forecasts.
- Diagnostic Imaging activity in 2000/01 has matched or exceeded the 2003/04 forecasts (with the exception of Ultrasound).
- Laboratory activity in 2000/01 is approximately 10% lower relative to both the 1996/97 actuals and the forecasts.
- Rehabilitation therapy activity (Physiotherapy and Prosthetics & Orthotics) in 2000/01 has fallen short of the 2003/04 forecasts. The same applies to Respiratory Therapy. 2000/01 Occupational Therapy volumes exceed 2003/2004 projections.
- Cardiovascular services activity in 2000/01 was variable. Cardiac stress tests are lower than 2003/04 projections, echocardiography is generally consistent with projections, and Holter scans are significantly higher than the volumes forecasted.

In summary, the analysis of the 2000/01 volumes indicate that the general activity trends for many of the programs and services are falling short of the forecasted activity trends detailed in the functional program and upon which the space was planned. Forecasting future health service utilization is very difficult and requires accurate predictions of future population size and demographics, as well as good estimates of changes in population utilization. Therefore, the fact that the plan over-estimated current workload is not surprising, but is noted and has been considered in the development of options for completing the capital project.

BED ANALYSIS

A cataloguing was undertaken to identify the current beds by program/service by site and location as compared to the total beds by major program grouping, as directed by the MoHLTC post-HSRC, and to the current development plan. In addition, opportunities for improved clinical efficiencies identified in this operational review were used to identify target bed allocations by program for completing the capital project.

A chart of current bed allocations is provided in Appendix V. Based on the current Functional Program, the hospital will be slightly over-capacity in relation to the HSRC/MoHLTC directions (586 beds compared to the 575 directed).

Data provided by the MoHLTC comparing chronic and ELDCAP beds per 1000 population 65+ and 75+ indicated that the planned CCC beds allocations are within 5% of the Ontario average. The planned 85 CCC beds appear to be appropriate at this time.

The HSRC identified that the HRSRH facility should operate adult acute mental health beds with a target of 39 beds within the HRSRH building. The North-Eastern Mental Health Centre (NEMHC) was directed to provide for the Child & Adolescent mental health beds at the Algoma hospital site. After discussions with key individuals and a review of some additional studies, it was evident that the adult acute mental health beds would be well served if they were to be located with the other adult mental health beds and the Child & Adolescent beds at the Algoma site. This would allow for consolidation of staff and resources associated with the provision of mental health services on one site, and would address many of the current concerns around fragmentation of mental health care. However, these discussions did not extend to the North-Eastern Mental Health Implementation Task force. As a result, the Implementation Task Force's impending recommendations to the MoHLTC on the approach to service delivery and implementation timing would need to be considered in developing HRSRH's plan to move forward on both the operating and capital fronts.

Based on clinical benchmarking, the target number for mental health beds at HRSRH could be reduced to 31. The feasibility of this reduction is further discussed in Chapter 9 in the Operational and Efficiency Review.

As part of the overall Operational Review, a utilization review was conducted of HRSRH's current bed use and bed management practices as compared with cohort hospitals. This analysis, presented in greater detail in Chapter 9, is summarized below:

- There are substantial opportunities to improve utilization of acute inpatient beds as compared to cohort hospitals in Ontario;
- 2 targets were assessed:
  - Bed days conserved through applying 'cohort' average targets, and
  - Bed days conserved through applying a benchmark of 25th percentile;
- Improved utilization to the cohort average would result in a reduction in bed utilization of 69 beds, while the 25th percentile savings equates to 150 beds (assuming 85% occupancy).

New target bed allocations, by program, are illustrated in Exhibit 11.

Note (in Exhibit 11) that for the Mental Health program, whereas the HSRC designated a total of 39 mental health beds, the target number of beds specified is only 31 which reflects the reductions resulting from the application of the clinical efficiency analysis.

Exhibit 11: Recommendations for bed allocations by program[9]

Program	Beds by Program/Service (Based on the acute/non-acute target defined by MoHLTC – [illegible] total)	Target (Revised)
Orthopaedics	[illegible]	[illegible]
Neurosurgery	[illegible]	[illegible]
Cardiac Services	[illegible]	[illegible]
Other Medical/Surgical	[illegible]	[illegible]
Obstetrics	[illegible]	[illegible]
Neonatal Intensive Care	[illegible]	[illegible]
Mental Health	[illegible]	[illegible]
Complex Continuing Care	[illegible]	[illegible]
Rehabilitation	[illegible]	[illegible]
TOTAL	[illegible]	[illegible]

BUILD AREA EVALUATION

The HRSRH project gross floor area (referred to in this report as building gross square feet = bgsf) for the proposed completed project at the Laurentian site, identified in the December 2001 floor plans, is 916,300 bgsf. This total area was further divided into components with circulation and mechanical and electrical areas expressed separately, often expressed as component gross square feet (cgsf). These component areas are itemized in the Capital Variance Analysis chart, which is included in Appendix VI. The Capital Variance Template also compares these areas to other key documents, including the Functional Program report (April 1998), which formed the basis for the project approved by the Minister in June 1998 and the sketch plan report submission dated April 30, 1999.

Based on the current project, the total area of new construction is 563,785 bgsf, the area to be renovated is 253,803 s.f. and the area for life safety upgrades is 98,745 s.f. Exhibit 12 shows the area approved by the MoHLTC (June 16, 1998) as compared to the current status.

Exhibit 12: Area approved by the MoHLTC

	Minister's Approval (June 1998)	Marshall & Murray (May 2002)	Difference
New Construction	405,086	563,785	+ 158,697
Renovation Area	129,100	253,803	+ 124,703
Life Safety Upgrades	187,000	98,750	(88,500)
Remain Existing	55,250	-	(55,250)
Total Area (GFA)	**[illegible]**	**[illegible]**	**[illegible]**

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[9] Neonatal Intensive Care beds are shown in brackets and are excluded from the total area, as they are not considered part of the rated bed count.

Some of the differences between the Minister's approval (based predominantly on the Functional Program), the Sketch Plan and the May 2002 drawings are:

- The conversion of programmed component gross area to gross floor area, which informed Minister's Approval, reflects the application of the standard Ontario Health sector allowance of 1.265. However, based on the drawing take-offs, the subsequent area categories reflect an actual grossing factor of 1.37.
- The amount of space to be renovated and the which life safety upgrades were planned initially (i.e., based on Minister's Approval), a move in keeping with the principles intended to be applied by the HSRC. Specifically, facility modifications are limited to areas that are not directly implicated by the program changes directed by the HSRC.

Given the significant difference between the total area according to the June 1998 plan and the current plan, the hospital has voiced concern that there may have been an error or misunderstanding in their original submission to the Minister, prior to approval. The hospital has expressed the opinion that the 405,000 s.f. area of new construction may have been incorrectly expressed in component gross square feet (cgsf) as opposed to building gross square feet (bgsf). *Upon review of documents, however, it became clear that the estimates for the capital cost at the functional program stage were expressed in bgsf.*

More specifically, the consultants reviewed the initial estimate of capital cost at the functional program stage that was prepared by Bergeron Consultants Inc. In the preamble of the December 23, 1997 document, Bergeron states, "Method of Measurement :: The areas of new construction were derived from the functional program plus a building gross factor of 1.3 less the existing space."

In addition, the master plan report[9] was also reviewed where it states in Section 5 that "The Functional Program has defined a total area for the new project of approximately 680,000 departmental gross square feet (dgsf). This translates into a total building area of approximately 900,000 bgsf. The existing building area is approximately 370,000 bgsf and, therefore, the requirement for new construction is in the order of 530,000 bgsf."

There appears to be further confusion following submissions of the Block Schematic Report (November 30th, 1998) and the Sketch Plan Report (April 30th, 1999) by Nicholls, Yallowega, Bélanger Architects to the HRSRH. The confusion centred on unclear and potentially erroneous usage of bgsf and dgsf in the quoting of the build area.

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[9] Nicholls, Yallowega, Bélanger Architects and Klaus P. Dude Architect Inc. Masterplan Report. December 18, 1997.

[illegible] Consultants Inc. also prepared a Block Schematic Estimate (December [illegible], [illegible]). This determined that the area of new construction is [illegible] GFA for the main building, and [illegible] GFA for the Children's Treatment Centre in the take-off section of the report, for a total of [illegible] GFA. However, in the executive summary of the report, the area of the main building is reduced to [illegible] GFA, a decrease of [illegible] GFA. There is no further documentation to demonstrate how this reduced number was derived.

Finally, a key change in functional content has been the development of the co-generation (co-gen) approach for the physical plant. This is a joint development between the hospital and the Region of Sudbury, to be operated by a third party. The area of the co-gen plant is noted at [illegible] s.f. representing [illegible]% of the total project area of [illegible] s.f. Further, this represents [illegible]% of the Central Mechanical/Electrical Plant space ([illegible] s.f. which includes the area noted for the co-gen installation), or [illegible]% of the total mechanical space in the project. Information provided by [illegible] & Associates ([illegible] capital project costing consultants) indicates that the cost of the Central Plant/co-gen facility is $[illegible] million (includes the construction, consulting/architectural fees, etc.). In the Operational Review consultants' opinion, the inclusion of the co-gen facility was not a significant contributor to the project cost increase.

Exhibit [illegible] summarizes the area breakdown by component, circulation space and mechanical and electrical space, as per the various submissions:

Exhibit [illegible] - Area Breakdown by Component

	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The main findings from the above analysis are as follows:

- The functional area of the future hospital has declined by [illegible] from the area originally programmed (i.e., from [illegible] to [illegible]). When expressed as a percentage

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[illegible]

[illegible]

- [illegible]
- [illegible]

[illegible]

[illegible]

[illegible]

	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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The un-funded gap is $117.2 million on the construction & ancillary portion of the project budget, and $166 million on the overall project budget.

REVIEW OF CAPITAL PROJECT MANAGEMENT AND PROCESSES

HRSRH was anxious to proceed using a construction management approach versus the stipulated sum approach routinely used for hospital construction projects. The MoHLTC, having reservations and limited experience with this approach, requested that HRSRH sign a waiver wherein the Board assumed responsibility to pay for all costs above the MoHLTC contribution. Consequently, it became crucial that the HRSRH dedicate resources within HRSRH to manage/oversee the project.

Based on interviews with key personnel involved in the project as well as review of relevant documentation internally and with the MoHLTC, the following observations are made:

- The project has suffered from a lack of oversight at all levels and a lack of adequate supervision. Essentially, insufficient resources appear to have been dedicated from within the organization to monitor and direct such a substantial project. As well, the Implementation Approach/Phasing Strategy did not adequately consider the operational and clinical imperative to consolidate the more critical programs early in the development. The project as it stands at the completion of Phase 1 cannot support any service amalgamation from other sites, as both key clinical services (e.g. Emergency, Surgical suites, Intensive Care) and support services (e.g. Clinical Labs, Food & Nutrition Services) are not operational.
- It appears that a significant contributor to the increase in space may be a result of an error made during the initial capital plan development and submission to the MoHLTC.
- The lack of adequate capital planning support within HRSRH, and the late addition of an independent cost consultant meant that exceptional cost increases were not being identified.
- Informal and unstructured processes and poor documentation regarding the many issues, negotiations and details relating to this project also contributed to the current situation.
- The roles and responsibilities were not clearly defined for each member of the project team. The consultants noted that the architect's responsibility for cost control was removed from the contract, which is considered an unusual practice. As well, the MoHLTC requires that all hospitals involved in capital projects employ an independent cost consultant to monitor the costs throughout the design process. This is an independent monitor to assist the Hospital and the MoHLTC, but it does not relieve the design team of their duty to design within a given scope and budget.

- HRSRH capital project leadership had no experience in managing large construction projects.
- Policies and procedures play an important part in a project of this size. Even if policies and procedures were in place, they were not implemented and/or rigorously followed up.
- Project comparisons of space and costs in the proposed plan with what was approved, were not included in the Block or Sketch reports.
- Failure to ensure that the Board was fully informed of the financial status of the project at every step, including any potential financial liability related to change orders.
- Documentation released for tendering appears inadequate in some instances and has led to the development of contracts that are based on insufficient detail.
- The monitoring of scope and escalation changes was inadequate. For example, the budget for pre-cast panels for the cladding system was $25/s.f. and the board subsequently approved a change to a more expensive system without consideration of the impact on the approved budget.
- The design team did not track the project at all times and this responsibility appears to have been left to the construction manager. Hospital staff, Board members and other external stakeholders acknowledge that HRSRH placed a great deal of trust in PCL to complete the project on time and on budget. However, PCL was rarely challenged on decisions made related to the project. This pattern has changed in the past nine months.

The review of the capital project identified many of the factors that led to increases in space, cost, and a reduction in the space per bed. The consultants did not attempt to apportion or prioritize these multiple factors and any attempt to do so, would require an exhaustive review and audit beyond the scope of this hospital operational review. Given that completion of the project as currently planned would significantly exceed the community's and the MoHLTC's capacity to finance the project, the Steering Committee agreed that the resources of the operational review should be focused on the development and evaluation of alternative options for completing the project in a timely and cost effective manner.

EVALUATION OF OPTIONS TO COMPLETE THE CAPITAL PROJECT

INTRODUCTION

A key deliverable of the capital project review was to recommend an option that would allow for the completion of the HRSRH capital project in the most cost effective manner possible. This implies completing a facility that allows HRSRH to meet as much of its HSRC directed mandate as possible at a cost that is affordable to the MoHLTC and the community.

Towards that goal, the consultants, working with the Capital Working Group, developed a set of criteria for the evaluation of project options:

1. timeline for implementation
2. timeline for clinical program consolidation
3. estimated capital to complete
4. operating cost impact
5. interim capital requirements to support ongoing provision of services
6. impact on the hospital's operations and the ability to decant services/programs
7. impact on high level project financing
8. impact on the Hospital's capital development group
9. nature of risk/exposure to unknown/unanticipated capital impact costs
10. saleability in relation to the MoHLTC, the Hospital (Board, management and medical staff) and the community

Using these criteria and high-level evaluation of these criteria, the following options were identified for more detailed and rigorous evaluation.

Option 1: Complete Project at Single Site As Originally Scoped and Designed (575 beds)
This option would involve the completion of Phase 2 construction and renovations at the Laurentian site as planned. No changes would be made except potentially to convert the current construction contract to a Guaranteed Maximum Price (GMP), or to a Stipulated Sum Contract (SSC).

Option 2: Complete Project at Single Site with Reduced Bed Count Through Clinical Efficiencies (506 beds)
This option would involve retaining all the programs and services at the Laurentian site with a modified, downsized Phase II. The reduction in the required bed complement from the originally specified 575 beds to 506 beds would be accomplished through the achievement of length of stay reductions based on the clinical efficiency benchmarks as identified in this operational review (see Chapter 9 for a detailed description of the clinical efficiencies analysis methodology and results).

Option 3: Complete Project by Retaining Two Sites (Laurentian and Memorial) with Original Bed Count (575)
This option would involve a reduction in the originally planned construction at Laurentian by 68,999 square feet and the provision of Complex Continuing Care (85 beds) and Transitional/Palliative Care (63 beds) out of the Memorial site on a temporary basis. This option included a suggestion that discussion with St. Joseph's Health Care (SJHC) should commence with a view to examining the feasibility of fully transferring the CCC and transitional/palliative beds to SJHC. 357 acute, 39 Mental Health, and 31 Rehabilitation beds would be located at the Laurentian site

Option 4: Complete Project by Retaining Two Sites (Laurentian and Memorial) with Reduced Bed Count Through Clinical Efficiencies (506 Beds)
This option is similar to Option 3 above except that the acute care beds are reduced to 69 as a result of the application of clinical efficiency targets, identified in Chapter 9.

DIFFERENTIATION OF OPTION 4A1 & 4A2

Following discussions by the Capital Working Group regarding Option 4, a number of modifications and further differentiations were applied to that option. These modifications were applied in order to attempt to arrive at the lowest cost solution based on the main premises of Option 4 which are to reduce acute care beds through clinical efficiencies and to locate certain mandated services (e.g. CCC) outside the Laurentian site in order to minimise the amount of construction still required there. The details of these are provided in Appendix VII. In the final analysis, two sets of differentiated options arose, 4A1 and 4A2. They are described as follows:

Option 4A1: Locate CCC and Mental Health Beds Off-Site and All Other Beds at Reconfigured Laurentian Site
This option involves the exclusion of 85 Complex Continuing Care beds and 31 Mental Health beds from the service portfolio of HRSRH. There are several potential options for that scenario. One of which is that the 85 CCC beds would be temporarily located at the Memorial site until permanent space is made available for them, preferably (in the opinion of the consultants) co-located with the long term care facility to be completed by the Sisters of St. Joseph's. The mental health beds would be transferred to the North East Mental Health Centre.

Option 4A2: Locate CCC Beds Off-Site and AllOther Beds at Reconfigured Laurentian Site
This option is the same as 4A2 except that mental health beds are kept within HRSRH and accommodated at the reconfigured Laurentian Site. This option would, therefore, require more space to be constructed than option 4A1.

In addition, a final option was developed based on minimizing the amount of new construction and renovation, and was primarily by reality that it may not be possible to any of the above options.

Option 4A3: Two site model with acute care beds at the Memorial and Laurentian Site
This option operates 80 beds at the Memorial site (cardio-vascular surgery, cardiology, thoracic surgery, and urology) and the remaining 426 (including CCC and rehabilitation) beds at the Laurentian site. New construction is limited to the emergency department, main entrance and the Children's Treatment Centre. Other renovations are minimal.

DIFFERENTIATION OF OPTION 4A3

Given the HSRC directions, and the community and hospital expectation that services will be consolidated on one site, option 4A3 also allows for completion of the project in ten years.

FINANCIAL EVALUATION OF SHORT LISTED OPTIONS

OBJECTIVES AND OVERVIEW OF NET PRESENT VALUE (NPV) ANALYSIS OF OPTION COSTS

Each of options 2, 4A1, 4A2 and 4A3 were evaluated using a net present value methodology for all incremental capital and operating cost. The model includes:

- the total projected capital cost of each option using both estimation results (Marshall & Murray's and Helyar's) as well as an estimate of the timing of cash flow requirements;
- the timing of the construction (start and finish) for each option;
- cost of capital;
- projected construction cost escalations and inflation of hospital operations;
- incremental costs of renovation, building and maintenance associated with providing services at the Memorial site (options 4A1/2/3); and
- delays in achieving operating efficiency savings from single site consolidation (since the options have different completion times).

In this model, options 4A1, 4A2 and 4A3 were further differentiated into two sub-options each. The sub-options relate to whether the physical space to accommodate the transferred Complex Continuing Care (CCC) beds would be built and completed in tandem with the Laurentian capital project or whether the Memorial site would be used as a temporary location for those beds. The following is a description of the evaluated options including the 4A1/2/3 sub-options:

- Option 2: All hospital programs on one site for a total of 506 beds
- Option 4A1: Mental Health and CCC beds excluded from Laurentian site and provided at other sites
  - Option 4A1.1: Temporary use of Memorial site for CCC until dedicated permanent space is available
  - Option 4A1.2: Simultaneous construction of CCC beds at permanent site
- Option 4A2 – CCC beds excluded from Laurentian site and provided at other sites

  - Option 4A2.1: Temporary use of Memorial site for CCC until dedicated permanent space is available
  - Option 4A2.2: Simultaneous construction of CCC beds at permanent site

- Option 4A3 –Acute care services at Memorial and Laurentian sites

  - Option 4A3.1: 80 acute care beds at the Memorial site, and 426 beds in operation at the Laurentian site
  - Option 4A2.2: Option 4A3.1 with consolidation of all services to the Laurentian site by 2012/13

APPROACH

Estimates of Phase II Capital Costs

Estimates of phase II project cost for each option were obtained from both Helyar and Marshall & Murray. Helyar's methodology is elemental and based on forecasts of very specific cost codes. Marshall & Murray estimates are based on broader, functional per-square foot benchmarks. Despite these differences in methodology, the overall project cost estimates are similar. Notwithstanding the similarity in the numbers from the two estimated, it was important to conduct the cost analysis using one set of project cost numbers.

In order to reconcile the estimates from the two consultants, these estimates were aligned into the following major cost categories for each option:

- Construction;
- Decommissioning;
- Furniture/equipment/IT; and
- Ancillary costs (design, functional programming, commissioning, project management, project contingency, GST).

In areas where there were differences, it was agreed that the midpoint between the two consultant estimates would be used as a project estimate to enable option evaluation. No attempt was made to estimate the current cost of moving from a two-site model in option 4A3.1 to a one-site model in option 4A3.2. Rather, the current costs of such a future project were estimated as the difference in costs between option 2 and option 4A3.1. Clearly, the actual cost of completing the project in two steps will be higher than proceeding immediately, and consequently, the estimated cost of option 4A3.2 should be considered a lower bound on the actual cost that project plan.

Exhibit 17: Phase 2 Capital Project Costs by Option Using the Mid-point Between Helyar and Marshall & Murray Estimates

HRSRH Capital Project	*Phase 1*	*Phase 2*				
		Option 2	*Option 4A1*	*Option 4A2*	*Option 4A3.1*	*Option 4A3.2**
Construction (incl dev chgs)	$116,410,000	$102,221,060	$76,401,298	$76,581,764	$71,707,497	$102,221,060
Mental Health				$6,604,401		$0
Decommissioning	$8,000	$4,099,500	$4,099,500	$4,099,500	$2,625,000	$4,099,500
Furniture, Equip't, IT	$11,140,952	$47,588,500	$46,066,500	$45,988,500	$36,000,000	$47,588,500
Ancllary Costs						$0
- Design Costs	$12,610,310	$6,981,213	$5,690,218	$5,974,242	$4,951,837	$6,981,213
- Functional Program'g	$595,842	$0	$125,000	$125,000	$100,000	$0
- Commissioning	$1,407,668	$2,422,500	$2,422,500	$2,422,500	$1,550,000	$2,422,500
- Project Management	$9,469,149	$4,698,422	$4,437,310	$4,437,310	$6,332,271	$4,698,422
- Project Contingency	$750,000	$5,507,335	$4,497,904	$4,497,904	$3,934,047	$5,507,335
- GST	$1,663,306	$1,755,700	$1,498,203	$1,516,921	$1,272,623	$1,755,700
Total Phase 1 or 2 Cost	*$154,055,227*	*$175,274,229*	*$145,238,432*	*$152,248,041*	*$128,473,274*	*$175,274,229*
CCC Renovation Costs			$ 500,000	$ 500,000		$ -
CCC Construction Costs			$ 23,366,000	$ 23,366,000		$ -
Minimum Total Project Capital Cost		*$329,329,456*	*$ 322,659,659*	*$ 329,669,268*	*$ 282,528,501*	*$ 329,329,456*

*Current costs estimates for the future completion are based on the difference between option 2 estimates and option 4A3 costs.

Exhibit 17 provides the results of that exercise for options 2, 4A1, 4A2, and 4A3.1. Options 4A1 and 4A2 may not require temporary renovation of the Memorial site for CCC, so that the Minimum Phase 2 Capital Cost assumes that this $500,000 expenditure can be avoided. No attempt was made to estimate the current cost of moving from a two-site model in option 4A3.1 to a one-site model in option 4A3.2. Rather, the current costs of such a future project were estimated as the difference in costs between option 2 and option 4A3.1. Clearly, the actual cost of completing the project in two steps will be higher than proceeding immediately, and consequently, the estimated cost of option 4A3.2 should be considered a lower bound on the actual cost that project plan.

Only option 4A3.1 offers a significant advantage in terms of the cost of completing phase 2. Again, it should be reminded that the cost estimate for option 4A3.2 should be considered a lower bound estimate.

Accounting for Construction Cost Escalation

No attempt was made to estimate the current cost of moving from a two-site model in option 4A3.1 to a one-site model in option 4A3.2. Rather, the current costs of such a future project were estimated as the difference in costs between option 2 and option 4A3.1. Clearly, the actual cost of completing the project in two steps will be higher than proceeding immediately, and consequently, the estimated cost of option 4A3.2 should be considered a lower bound on the actual cost that project plan.

Exhibit 17 details estimates of the current (2002) cost and do not account for any cost escalation. It is likely that there will be market escalation in the cost of hospital construction in northern Ontario between now and the conclusion of the tendering process. Note that this increase applies to the construction portion of the Phase 2 costs only and any other inflation is considered covered by the existing project contingency. Marshall & Murray did not provide escalation estimates. Helyar estimates that annual escalation could be as high as 10% per year for northern hospital construction.

An evaluation of the options was done using escalation cost assumptions of between of 0% and 10% to determine how variations in escalation estimates would influence the relative desirability of each option.

Accounting for Operating Savings Associated with One Site Consolidation

In the operational efficiency analysis conducted as part of the operational review, certain operational savings were identified that could only be achieved following the consolidation of hospital services onto a single site. The total value of those operational savings was calculated as $3.2 million per year (see Chapter 9 of this report for details). The construction in the 4A1 & 2 options would begin one year later than it would in Option 2. As such, there would be an additional year of operational savings in Option 2. Option 4A3.1 would never realize these operating savings, and Option 4A3.2 will defer these savings for ten years. These present value of the delay in achieving those savings is calculated and incorporated in to the model.

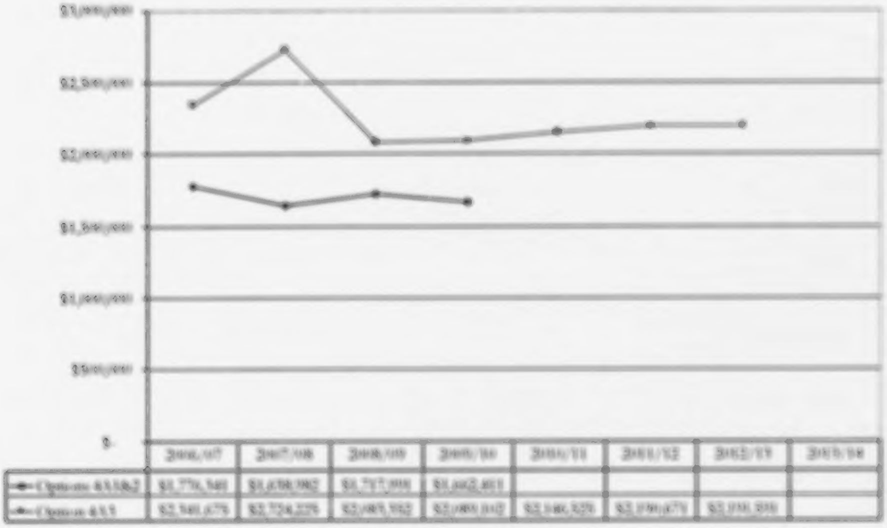
Accounting for the Incremental Memorial Site Building Capital and Building Operating in Options 4A1-4A3

The sub-options that involve the temporary (4A1&2) or long term (4A3) use of the Memorial site would result in incremental building operating and building capital expenses. Estimates of the future incremental building operating cost and building capital cost were obtained using:

- current plant, maintenance, operations, security, parking grounds-keeping and snow removal costs,
  - less savings that could be achieved if only three patient floors and access routes were kept open (4A1 & 4A2),
  - plus inflation of 3%,
  - plus specific building driven costs associated with keeping the Memorial site open.

Exhibit 18 provides the incremental cost estimates for 2005/06 to 2012/13. Option 4A3 has higher costs since option 4A1 & 2 would use only three patient floors and access routes. Option 4A3 also involves greater building expenditures since the use of the building is not seen to be temporary.

Exhibit 18 Incremental Memorial Site Building Operation and Maintenance Costs



PRESENT VALUE ANALYSIS RESULTS

The methodology applied in this analysis compares the net present value of each of the five options given the following for each option:

- estimates of the Phase 2 capital cost;
- estimates of option cost that is not part of Phase 2;
    - incremental and temporary operating and building maintenance cost associated with Memorial site operation, and
    - CCC temporary renovation cost & construction cost;
- estimates of the potential escalation in construction cost; and
- estimates of the timing of cash flows for each option.

The methodology discounts these future cash flows given assumptions regarding the cost of capital. Sensitivity analysis was conducted to assess the extent to which variations in the actual cost of capital and escalation rates impact on the option evaluation.

Exhibit 19 provides the net present value of each option for construction escalation cost estimates varying from 0% to 10% while holding the cost of capital constant at 6.5%. The two site model in Option 4A3.1 is the lowest net present value option over all assumptions regarding escalation, and has particular advantage if escalation of hospital construction cost is high. Following Option 4A3.1, options 4A2.2 which assumes tandem construction of CCC dominates all other options. The highest net present value is obtained with Option 4A3.2, which involves the deferral of one site consolidation for ten years. This option is very unattractive if escalation is high. Option 2 is the second highest net present value option if construction cost escalation is 0% per year and the third lowest if escalation is 10% per year. The widest range in net present value occurs if market escalation is high: $60,000,000 between 4A3.1 and 4A3.2. Exhibit 20 provides the net present value of each option for cost of capital estimates varying from 5% to 10% while holding the construction cost escalation constant at 5%. As was the case with the cost escalation sensitivity analysis, Option 4A3.1 is the lowest net present value option across the entire range of cost of capital percentages, and option 4A3.2 is the highest cost option. The range in net present value from the lowest to the highest cost option is approximately $20 to $46

Exhibit 19: Present Value of Project Options across Escalation Assumptions

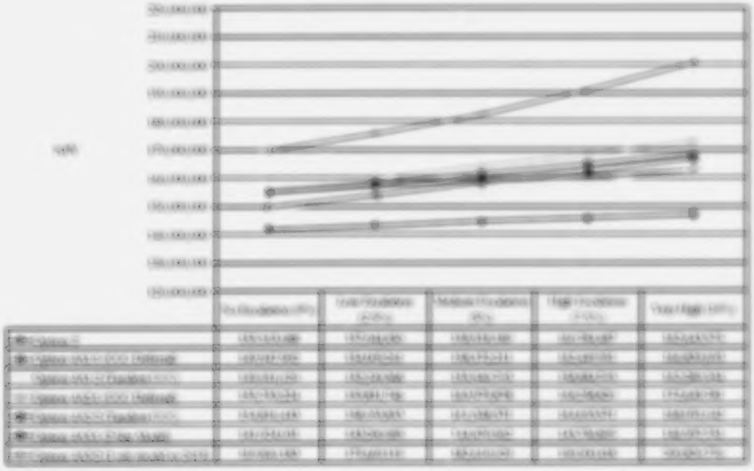
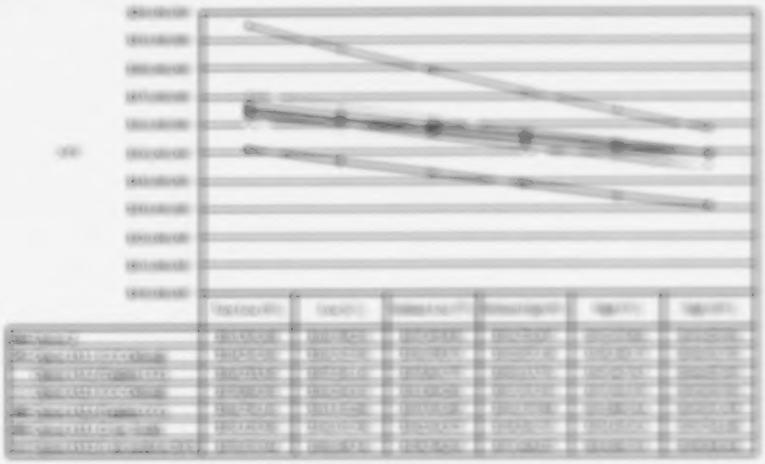


Exhibit 28: Present Value of Project Options versus Cost of Capital Assumptions



RECOMMENDATIONS

CAPITAL PROJECT PROCESSES

75. Regardless of the option implemented, several changes to the approach are assumed:

- The future bed count will be lower than that currently planned as a result of the utilization improvements to be made – adjustments to all programs, services and departments will be assessed critically and the necessary planning and design adjustments made (functional needs, facilities required and the approach to implementation);
- Ongoing reviews will be carried out to find as many ways as possible to reduce the project scope for equal or better functional, and operational and capital value;
- Improved capital project control and monitoring systems will be put in place and adhered to in order to reduce the risk of incurring unanticipated additional capital costs and requiring that all project team members fulfill their required professional roles and mandates;
- The Ministry of Health and Long Term Care will be prompt and forthcoming in its project reviews, minimizing the impact on project schedule; and
- The Board will be kept fully informed and will fulfill its duty in ensuring that capital and scope control is maintained, according to its fiduciary responsibility. The Coach will be required to oversee that the Board is able to fulfill this critical function.

76. The hospital may also wish to consider conducting a detailed review of all contracts related to the capital project.

CAPITAL PROJECT COMPLETION

The HSRC directed the consolidation of services on one site. This is also the expectation of the community, the hospital and the medical staff. The advantages of a one site model include improved staff morale, accessibility and timeliness of services for all patients, continuity of care, and an improved ability to recruit and retain staff. In addition, a one site model will be more effective in providing the required support for the medical school. Further, the ability of the hospital to raise funds to finance the completion of the capital project may be hampered by anything other than a one site model.

Given the excessive spending on Phase 1 construction, it is not clear that any of the options considered are financially feasible based on the capacity of the community and the MoHLTC to contribute the required amounts. Alternative financing arrangements will be challenged by the fact that the hospital does not have an operating surplus.

Considering all incremental cash flow requirements over the next decade, option 1(C) has smallest capital budget, the smallest net present value, and requires the least community and MoHLTC contribution. However, it does not achieve the directions of the HSRC and will not meet the expectations of the community and the hospital. This option is the most feasible from a financial perspective. However, it will continue to provide HRSRH with operational challenges associated with sub optimal program and service alignment. In addition, the opportunities to reduce operating expenditures from one site consolidation are lost forever.

It should be clearly stated that option 1(C) does not assume an eventual consolidation to one site. The financial analysis shows that this option (1(C)), while it does allow for an additional decade to raise the necessary funds to complete the project, is the most expensive and least desirable option in the long run. The temptation to support a two site model for ten years with eventual consolidation onto one site should be actively discouraged. The long run cost to the community and to the MoHLTC of such an option is greater than any other option presented. The two site model (1(A)) or the one site models (2, 3(A), 3(B)) developed during the operational review will better serve all stakeholders.

At this time, there remains doubt that any of the options considered during the Operational Review are affordable from both the perspective of the community contribution, and the MoHLTC share of the project cost. Therefore, it is not possible to recommend a specific option for the timely completion of the capital project.

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8. DETAILED FINANCIAL ANALYSIS

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YEAR OF THE MERGER 1997/98

With the merger being announced in May 1997, the financial results for 1997/98 for HRSRH were the combination of the results of the three legacy hospitals. HRSRH reported an operating deficit of $3.9 million for the year. Restructuring costs totalled $5.1 million resulting in a total deficit for the year ended March 31, 1998 of $2.1 million. The MoHLTC base funding was reduced by $2.9 million in the year with one time funding increasing by $3.2 million for a net increase of $0.3 million over the prior year. Other revenues increased by $1.4 million in the year. Operating expenses increased by $1.4 million or 0.9% year over year. The Working Capital balance decreased by $0.8 million resulting in a very slight deterioration in liquidity ratios. Spending on the Capital Project began during the fiscal year with total capital expenditures on the project totalling $1.7 million.

FIRST FULL YEAR POST MERGER 1998/99

Fiscal 1998/99 was the first full year as a merged, single entity and proved to be financially worse than the prior two years. Turnover in the Chief Financial Officer position resulted in a lack of financial leadership and reduced focus on spending controls. The reduced focus on both controls and financial accountability, created an environment where inefficiencies went unnoticed, expenses and FTE's increased while weighted cases were decreasing. Despite an increase in MoHLTC total funding of $5.2 million with total revenues increasing $5.2 million in the year, the HRSRH reported an operating deficit of $4.5 million before restructuring costs of $6.1 million bringing the total deficit for the year ended March 31, 1999 to $10.6 million. Operating expenses increased $6.7 million or 4.2% with wages and benefits accounting for $5.9 million of the total increase in operating expenses. Working capital deficiency increased to $2.9 million from 13.4 million in the previous year. Spending on the Capital Project totalled $7.4 million in the year.

FISCAL YEAR 1999/00

Total revenues in 1999/2000 increased from $163.4 million in the prior year to $173.0 million in 1999/2000 with the MoHLTC increasing its one time funding by $2.1 million while also increasing its base funding by $4.9 million from the prior year. Operating expenses increased $11.6 million or 6.8% in the year resulting in a deficit before restructuring costs of $6.3 million. Continued turnover in the finance department compounded ongoing issues around financial controls, measures and accountability. Restructuring recoveries exceeded expenses by $2.1 million in the year as a result of the HRSRH not being reimbursed in the prior year for restructuring. The total deficit for the year ended March 31, 2000 was $4.4 million. A credit facility with the Royal Bank was established during the year, and $5.3 million of the facility was outstanding at year-end. The working capital deficiency increased to $10.4 million at year-end from $2.9 million in the prior year. Spending on capital totalled $24.8 million in the year with $4.6 million on the Capital Project and $20.2 million for equipment and other capital.

FISCAL YEAR 2000/01

In fiscal 2000/01 the MOHLTC increased its base funding by $14.6 million as well as increasing one time funding by $6.0 million for a total increase in revenues from the MoHLTC of $20.6 million over the prior year. Other revenues also increased by $3.0 million for a total increase in revenue of $23.6 million or 13.7% over 1999/2000. Operating expenses for the year increased by $23.8 million or 13.3% from the prior year, resulting in a deficit before restructuring costs of $6.7 million. Restructuring expenses, net of recoveries were $5.9 million for the year resulting in a total deficit for the year of $12.6 million. Borrowings from the Royal Bank were $26.3 million by year end with $31.6 million in short term investments for a net cash balance of $5.3 million. Working capital had further deteriorated to negative $35.1 million by year end. Spending on the Capital Project continued in the year with expenditures of $44.3 million.

FISCAL YEAR 2001/02

In fiscal 2001/02 the HRSRH reported a deficit before restructuring costs of $23.5 million. Restructuring expenses of $2.1 million resulted in a total loss of $25.6 million. The MoHLTC increased base funding by $3.1 million while decreasing its one time funding by $11.2 million, for a total decrease in MoHLTC revenue of $8.1 million over the prior year. Total revenue for the year decreased by $10.5 million. Operating expenses continued to increase with a $6.3 million jump while restructuring expenses dropped by $3.8 million. Spending on the Capital Project continued in the year with expenditures of $48.8 million. Borrowings from the Canadian Imperial Bank of Commerce (CIBC) were $33.1 million by year-end. The revised working capital deficit increased to $70.0 million. A permanent CFO with experience in a senior finance capacity at a Toronto hospital was recruited and started in April 2002.

TRENDS IN OPERATING EXPENSES AND REVENUES

Exhibit 21 provides a summary of the revenues and expenses broken down by major type for 1996/97 to 2001/02 and are based upon the Year End Supplementary Operating Report information. Both expenses and revenues have been increasing steadily over the time period. The large operating deficit of $25.6 million in 2001/02 is the result of a $6.3 million increase in expenses coupled with a $10.3 million drop in revenues. The sharp rise in the working capital (cash flow) shortfall in 2001/02 of $70.0 million is the result of both operating and capital fund deficits. Note that the working capital figures from the audited statements (and approved by the MoHLTC) are shown as well as restated numbers provided by the HRSRH based on changes in the method used by the hospital to account for working capital.

Exhibit 21: HRSRH Operating Revenues, Expenses, and Working Capital by Fiscal Year (Year End Supplementary Reports) As per year-end audited figures agreed upon between the MoHLTC and HRSRH

	1996/1997 Actual	**1997/1998 Actual**	**1998/1999 Actual**	**1999/2000 Actual**	**2000/2001 Actual**	**2001/2002 Actual**
MOH LTC Base	129.0	126.1	129.7	$134.6	$ 149.2	$ 152.3
MOH LTC – One Time	2.1	5.3	6.9	9.0	15.0	3.8
All Other Income	29.4	30.8	28.8	31.4	34.4	32.2
Total Revenue	**160.5**	**162.2**	**165.4**	**175.0**	**198.6**	**188.3**
Salary and Wages	92.4	94.1	99.6	101.9	110.5	112.1
Benefits	17.7	16.0	16.4	16.0	19.5	24.1
Medical Staff remuneration	7.0	8.3	8.7	9.0	14.4	14.5
Supplies and Other	22.5	22.5	20.2	26.4	27.5	27.6
Medical/Surgical	11.5	12.7	13.1	14.2	15.6	16.8
Drugs & Med Gases	6.0	6.0	6.7	7.2	9.7	9.7
Interest & Bad Debts	.2	.2	.5	.5	1.6	.3
Amortization	4.5	3.2	4.7	6.3	6.5	6.5
Total Expenses	**161.8**	**163.2**	**169.9**	**181.5**	**205.3**	**211.6**
Operating Deficit	**(1.3)**	**(1.0)**	**(4.5)**	**(6.5)**	**(6.7)**	**(23.5)**
Restructuring (Net of Recoveries)	**0**	**1.1**	**6.1**	**(2.1)**	**5.9**	**2.1**
Total Deficiency	**(1.3)**	**(2.1)**	**(10.6)**	**(4.4)**	**(12.6)**	**(25.6)**
Working Capital per fina statements (approved by MoHLTC)	**8.9**	**8.8**	**14.2**	**3.6**	**(3.6)**	**(70.0)**
Working Capital per revised HRSRH figures	**(0.3)**	**(0.4)**	**(2.9)**	**(10.4)**	**(35.1)**	**(70.0)**

ANALYSIS OF HRSRH CASH FLOW POSITION

HRSRH prepared weekly cash flow analysis commencing late in fiscal 2000/01, and throughout fiscal 2001/02. The results of this analysis prepared by the finance department were reviewed by the Senior Management team of the hospital and reported to the Board on a monthly basis. The results of this analysis clearly indicated the severity of the deteriorating cash position as it developed with a projected March 31, 2002 cash flow deficit of $37.5 million.

In late 2001/02 the Royal Bank declined to extend the credit terms with HRSRH and the CIBC agreed to provide a facility with an advance for $40 million secured by a letter to the Hospital from the MoHLTC, as well as a $15.0 million line of credit. The CIBC advance was repaid by April 15, 2002 with funds advanced from the MoHLTC, leaving the hospital with an unused $15.0 million line of credit.

CASH FLOW PROJECTION-2002/03

HRSRH has prepared a cash flow analysis to the end of 2002/03. The hospital is currently operating with funds from the $15.0 million line of credit. Current projections have the hospital being in a negative cash position in excess of $90 million by the end of the fiscal year. It is clear that in the short term the impact of the Hospital's operating deficit, even taking into account the identified savings, will continue to have a significant effect on the cash flow position of the hospital. While the longer-term savings identified will bring expenditures in line with revenues, the recovery plan needs to detail the short term plan to address the cash shortfall and how this will be managed.

RECOMMENDATIONS

78. At the time of the review the HRSRH has a cash flow monitoring model that is updated daily by the finance staff. Given the current state of the cash position and the anticipated direction of the cash balance, the senior management team should review the model at each meeting. Variances from the forecast should be immediately brought to the attention of senior management so that decisions may be made regarding HRSRH operations and obligations to staff, suppliers and patients.
79. The current banking arrangement provides for a $15.0 million line of credit. The cash flow projections to the end of the fiscal year contemplate a $90 million cash flow deficit. The ability of the hospital to obtain additional financing from the bank may be limited given the current and projected financial position. The recovery plan process should detail how the MoHLTC and the HRSRH will work together to bridge the

short-term cash shortfalls until the implementation of the recovery plan can bring projected expenses and revenues back in line.

FINANCIAL REPORTING PROCESS

The financial reporting process before the merger had specific timelines for reporting of both financial and activity based measures, as well as timelines for Managers and Directors to report back on their variances and action plans. During the years following the merger (1997/98 to 2000/01), the Meditech system consolidation and turnover in the Chief Financial Officer role resulted in the timelines, accuracy and follow up on the financial reporting process becoming very infrequent and very unreliable. The inability to produce accurate and timely financial reports for Managers, Directors and VPs resulted in a lack of financial accountability.

The Hospital hired an interim Chief Financial Officer, at the recommendation of the MoHLTC, who began improving the financial reporting process and the reliability of the outputs. These issues have been resolved and the financial reporting process is currently timely and accurate, with the processes for review and variance reporting being reinstated in 2000/01. Expenses and FTEs increased in periods when financial measures and accountability were not available or implemented, and are still currently increasing. Written variance reports are now required on a monthly basis with all Program Directors presenting the variances and action plans for their respective department to an interdepartmental program committee (IPC).

Vice Presidents review financial results at senior Management Committee meetings prior to being distributed to the Board each month. The monthly report to Senior Management and the Board includes a balance sheet, a statement of operations, a cash flow analysis, a reconciliation of the deficit and a narrative of significant fluctuations and variances. A major issue identified is that activity based reporting has not been available in certain departments since 1997/98 as a result of workload management not being implemented. This has created an inability for the organization to hold Managers, Directors and Vice Presidents accountable for results relative to the activity in their departments.

RECOMMENDATIONS

80. Activity based reporting must become part of the monthly financial reporting package as quickly as possible so Managers can be held accountable for the departmental financial results relative to the amount of care they are providing. All activity based and financial reporting should be reviewed by the Board prior to submission to the MoHLTC.
81. Once implemented, workload measurements must become part of the monthly financial reporting package.

82. A more formal process for Directors to review their individual results with their Vice Presidents needs to be developed, communicated and implemented. This focus by the Vice President will ensure variances are identified and clear, concise action plans are developed to address the variances.
83. Each Vice President should provide to the CEO and CFO on a monthly basis a formal written report summarizing highlights for the month (financial or otherwise) with detailed action plans for the month as well as follow up on the prior month action plans for their respective departments.

BUDGETING AND PLANNING PROCESS

Prior to the merger, as with the Financial Reporting Process, the budgeting process was driven by the Chief Financial Officer's office and had specific timelines with required information submissions to be provided by Managers, Directors and Vice Presidents. Budgets were generally balanced with few budget increases year over year with the exception of agreed upon contractual increases. Departmental activity based statistics, for all departments, were an integral part of the budget process allowing Managers to understand the workloads that were expected from their department for the allocated budget dollars. From 1997/98 to 2000/01 the budgets were pushed down with little or no involvement from the Managers and Directors and no activity-based measures were used in the formulation of the budgets. In 2001/02, Managers developed staffing patterns for their departments and were involved in determining the budgets for their individual departments. As previously mentioned, the shortfall in this process is that the budgets are not tied to volumes through workload measurement. The process in place appears reasonable; the issue is that a critical component of that process is missing. Once the budget is developed for the year it is locked down and not altered. The HRSRH uses a quarterly forecasting process to update expectations as the year progresses, instead of altering the budget. We have also identified that there is no framework for accountability within the organization that would enable hospital staff to understand how their individual performance will be evaluated.

RECOMMENDATIONS

84. Activity based information must be incorporated into the budgeting process and communicated so that Managers and Directors clearly understand what is expected of them and their departments.
85. Senior management needs to develop and implement a performance measurement system for all staff, which ensures that all areas and actions that require improvement in the hospital are being identified, communicated and followed up on in a timely basis.

9. OPERATIONAL EFFICIENCY REVIEW

INTRODUCTION

This chapter provides the details of the approaches employed in evaluating operational efficiency at HRSRH. A full description is given of the qualitative and quantitative methodologies used in the review. The chapter also outlines the results of the operational efficiency review at the overall hospital level and for the individual hospital departments and clinical programs reviewed.

The chapter is organized into the following sections:

- **Data Quality Review (MIS and Discharge Abstract Data)**: This section provides the methodologies, findings, and recommendations associated with the data quality audits conducted on HRSRH's MIS and discharge abstract databases.
- **Methodology**: This section describes the detailed approach and tools used to evaluate operational efficiency, including concurrent and retrospective utilization reviews (chart audits), financial and clinical benchmarking, and detailed departmental and program reviews (including interviews).
- **Hospital Level Results:** This section outlines the overall hospital level results of the operational efficiency review. Target savings are provided by department and clinical program.
- **Clinical Program and Departmental Findings:** This section presents the detailed findings of the departmental and program reviews. For each department or program the following sections are described:
    - an overview;
    - relevant current issues;
    - recent initiatives;
    - financial and/or clinical benchmarking results;
    - chart review results;
    - target savings; and
    - recommendations for achieving them.

DATA QUALITY REVIEW

OBJECTIVES OF THE DATA QUALITY REVIEW

Both the clinical discharge abstract database (DAD), and the MIS financial and statistical database were used heavily in this review. Most of the efficiency indicators used in the benchmarking analysis were calculated using data from one or both information sets. As such, it was important to first evaluate the validity of this data to ensure the results could be used to inform recommendations.

This section describes the approach used in reviewing the data quality for each of the DAD and MIS databases at HRSRH and the results of the review. Recommendations to improve the quality of the data in future years are also presented.

CLINICAL DATA QUALITY REVIEW

The clinical data quality review objectives, particularly as they relate to coding functions and to the goal of timely, accurate coding, were:

- To identify coding practice issues contributing to incorrect diagnosis and procedure selection and sequencing, including an evaluation of:
  - coding guidelines;
  - coding and abstracting tools; and
  - reference material and continuous education.
- To evaluate documentation issues as they relate to the coding process, including:
  - chart completion guidelines;
  - universal chart order; and
  - physical condition of the chart.
- To evaluate the effectiveness of current data quality efforts to monitor coding practices.

DATA SOURCES

The 420 charts reviewed were selected through a stratified random sample of inpatient discharges from the 2nd quarter of 2001/2002 (e.g. July 1 to September 30, 2001). The sample selection methodology was patient day weighted such that higher lengths of stay programs are more likely to be selected. Each stratum (i.e. Medical, Surgical, Psychiatry, Obstetrics and Neonates) was sampled according to the proportion of days of the current fiscal year discharges that each stratum represents. In addition, charts were selected from each stratum in proportion to the length of stay. This ensured that the sample was also representative of the hospital days at the facility.

REVIEW PROCESS

Each record in the sample was reviewed in its entirety and the review team:

- assessed HRSRH's compliance with established ICD-9-CM coding principles and CIHI coding guidelines and definitions for sequencing of diagnoses and procedures; and
- compared the diagnosis codes and types, age, sex, admission and discharge dates, entry codes, physician number and service combinations, discharge status and Resource Intensity Weight (RIW), obtained by the HRSRH coder for each discharge to the same information gathered by the review team.

Original Case Mix Group assignment and corresponding RIW value was derived from the resident abstracting system. Cases where coding between the HRSRH and review team differed were re-abstracted using the review team recommended codes. Differences between the original and re-abstracted cases were documented, indicating the potential impact of resulting CMG and RIW changes.

The review team attempted to determine the reason that the review yielded changes for each chart that resulted in coding changes. Reasons were flagged as a coding practice issue, a documentation issue, or a combination of both.

Criteria for coding issues related to the incorrect assignment of codes, missed codes or procedures, and coding practices contrary to CIHI standards.

Criteria for documentation issues related to contradictory information and diagnosis /conditions not documented but shown on clinical findings.

FINDINGS

The following findings were identified through the clinical data quality review:

- 109 (26.0%) of the total 420 sample charts reviewed had a change in RIW value, where:
  - 85 increased in RIW;
  - 24 decreased in RIW;
  - The total change of RIW values for this review was 79 weighted cases;
  - The average RIW change per re-coded chart was 0.7225; and
  - The percentage change in RIW for the sample was 7.5%; and when re-weighted to be representative of HRSRH volumes, the estimated impact on HRSRH inpatient RIW was 5.5%.

- The results indicate that coding practices need to be reviewed further.
  - 50 charts (11.9%) were reassigned as a result of incorrect assignment of Most Responsible Diagnosis or missed coding/abstracting of a procedure;
  - Both under coded and over coded cases were identified in this review.
- 109 charts had a clearly identified cause of coding deficiency as follows:
  - 84 (20.0%) coding issues;
  - 23 (5.5%) documentation issues; and
  - 2 (0.5%) combination of both.

Exhibit 22: Impact of Coding Quality

	Cases	Weighted Cases	% of Total Cases	% of Total RIW
Total Charts Reviewed	420	1,058		
Change in CMG Assignment	50		11.9%	
Change in Complexity Level*	57		13.6%	
Increase in RIW	85	93	20.2%	8.8%
Decrease in RIW	24	14	5.7%	1.3%
Net Change	109	79	26.0%	7.5%

* Where there was not a change in CMG

ADDITIONAL GENERAL FINDINGS

The Physical Chart, Including Documentation

- Many charts did not have Discharge Summary or face sheet documentation. Some charts had reports filed in the wrong admission and coders incorrectly coded from these reports. This could have a significant impact on the ultimate CMG, Complexity and RIW assignment of the case. Multiple copies of dictated notes and letters from various external agencies (e.g. doctors' offices, other institutions) were filed throughout the admission. Though this information is important to the coding process, it may increase the amount of time required to review the chart and may be better utilized if filed at the end of the admission.
- As noted in the Retrospective Utilization Clinical Review, improvement and standardization of documentation practices of various healthcare providers must take place. Incomplete and/or inaccurate documentation has a significant impact on coding practices and reporting.

Coding Practice

- Some charts are coded from an incomplete record; it is unsure if these charts are revisited upon completion to ensure optimal coding. The entire admission should be reviewed to ensure complete and accurate coding and diagnosis type assignment.

- Documentation in progress notes, nurses' notes, and diagnostic/laboratory findings should be fully utilized in coding. In some cases, patients' clinical history and pre-admission conditions were typed as co-morbidity or as post admission complication thus overstating the complexity of the assigned CMG.
- There is inconsistency amongst HRSRH coders in the assignment of diagnosis type, which could be improved by the re-education of CIHI Coding Guidelines and the development of institution specific guidelines and policies and procedures to enhance coding quality. Symptoms were often coded as Post Admission Comorbidities (Type 1) though the underlying diagnosis for the symptoms had already been coded. Symptoms should only be coded as Type 1 if it becomes a main focus of the treatment or investigation.
- Charts that are incomplete at time of coding could be a major factor in under-reporting or under-coding.

RECOMMENDATIONS

86. Investigate/evaluate current chart documentation policies and procedures and create a documentation improvement working group to assist in evaluating current documentation practices, with a goal to improving standards. To ensure that all stakeholders are represented, this group should have representation from the Clinical Programs, including physicians, Decision Support, and Health Records, with a Senior Management sponsor.

    - The Documentation Improvement Working Group should:

        - review specific findings related to documentation for this report and the Clinical Utilization Report;
        - review current documentation standards and policy and procedures;
        - develop clear expectations related to Discharge Summaries and face sheet completion;
        - create clear Documentation Guidelines for all health care providers; and
        - create clear Documentation Guidelines related to the identification and documentation of Alternative Level of Care (ALC) patients.

    - An action plan should be developed with target timeframes and be reported and monitored by the Clinical Programs and Senior Management.

87. Develop Coding Guidelines

    - With support provided by the Documentation Improvement Working Group, the Health Records Department should lead the development of Coding Guidelines for high volume/resource consumption cases.
    - These guidelines should be developed with the management and the healthcare providers of the Clinical Programs and members of the Health Records Team, including coding technicians. These guidelines should be institution/program specific and in accordance with CIHI guidelines.

88. Health Records Technician Chart Review: the review team recommends that the Health Record coding staff read the entire chart to ensure all procedures and co-morbidities are captured and reported accordingly. As this may affect the turnaround time of month end submission, based on current staffing, the department should conduct an impact analysis of this enhanced procedure.

80. Monthly Data Quality Review: the Health Records Department should institute a Monthly Data Quality Review process before the submission of month end. This should be conducted by a Health Records Administrator (HRA) or the Supervisor of the Coding Section.

   - Components of the monthly review should include the monitoring of:

      - complexity volumes by program;
      - RIW / ELW assignment by program;
      - errors / corrections by technician;
      - ANSEL, ALC days and atypical cases; and
      - Day Surgery compliance rates.

   - Spot chart audits should be conducted to support data quality.

81. Health Records Staff Education: Based on the coding assessment in this review, the Health Records coding staff requires additional in depth knowledge and understanding of CMG grouping methodology, including Complexity / Age / Frailty. Furthermore, we recommend that the Health Records Department develop an education plan to ensure all coding staff is abreast of changing methodologies. This plan can include self-testing and evaluation, and attendance at CIHI regional sessions, as well as attendance at Coded Records and regional Coding Quality Improvement Workshops.

82. The Health Records Department should develop an in-service program involving physicians from the Clinical Programs. Physicians from the Clinical Programs can provide insight to high volume/ high resource procedures/ case mix groups in order to better data collection.

83. Continued Education for Physicians: the Health Records Department and the Senior Management Team should develop a concise and customized Physician Education Program. Documentation should include the effect of improved documentation (including co-morbidities (post admit or co-morbidities), and the corresponding effect on Case Mix Group complexity, RIW and expected length of stay. These sessions should be provided with the support of the Finance department and at the convenience of the physicians.

   - It is noted that HRSRH has provided education sessions to physicians on the importance of documentation practices. We recommend this practice continue, especially with the advent of the new coding methodology ICD10-CA, introduced with April 2002 discharges.

   - Physicians require education on the coding methodology and their role in the process. This includes the provision of concise, complete, and timely documentation. Knowledge of how the Grouping Methodology works will also be of assistance.

   - Information sessions for users would aid in improved data quality. It is important that all stakeholders, including Physicians, Program Leaders, Senior Management and Health Records Staff are aware of their role in ensuring high quality coded data.

8.0 FINANCIAL AND STATISTICAL DATA QUALITY REVIEW

The purpose of the data quality review was to identify issues that may affect or confound the results of the financial benchmarking and trending analysis. These issues may arise due to inconsistencies and errors in the reporting of financial and statistical data. Such issues may affect the calculation of HRSRH's actual cost per weighted case (ACPWC) and require consideration when calculating benchmarks and comparing financial comparisons.

The HRSRH 2005/06 Ontario Cost Distribution Methodology (OCDM) and 2005/06 MIS trial balance were reviewed in consideration of:

- national and provincial guidelines for reporting MIS data;
- the Ontario Cost Distribution Methodology (OCDM) used to calculate the ACPWC;
- reporting to allow appropriate comparisons with other hospitals and to facilitate understanding of cost changes in costs and trends.

HRSRH staff responsible for preparing MIS data were involved throughout the data quality review process and have signed off on revisions made to the data.

The following key findings were identified through the MIS data quality review:

- Clinical Educators were charged to the programs where they worked, rather than to the Education functional centre. This results contributes to a higher ACPWC.
- Nursing workload numbers were estimates, as HRSRH is currently implementing a GRASP workload measurement system.
- Nursing Administration costs were included in General Administration, rather than Nursing Administration and Program Management.
- Program Management expenses were not allocated to inpatient functional centres; the Program Directors who are responsible for both inpatient and outpatient functional centres.
- Nursing Administration/Program Management expenses include a portion of the costs for Allied Health services Administration.
- A total of $[illegible] in drug expenses was left in the Pharmacy, and not distributed to the functional centres. In the OCDM, this amount is allocated to inpatients, with [illegible] going to [illegible].
- [illegible] of pharmacy workload is reported to inpatient and outpatient activity [illegible]. This may not be accurate, especially considering that Pharmacy workload numbers are estimates.
- Workload unit reporting is inconsistent for Respiratory Therapy, Pastoral Care and Rehabilitation Engineering.
- In 2005/06, HRSRH incurred approximately $[illegible] million in expenses in [illegible]. This was reported in General Administration, which may affect comparability to other hospitals. Further, this contributes $[illegible] to the 2005/06 ACPWC.
- HRSRH charged only $[illegible] in travel time expenses to the outpatient and diagnostic centres. [illegible] expenses [illegible] being charged to [illegible].

- [illegible]
- [illegible]

[illegible]

- **[illegible]** [illegible]
  - [illegible]
- **[illegible]** [illegible]
  - [illegible]
- **[illegible]** [illegible]
  - [illegible]
- **[illegible]** [illegible]

RECOMMENDATIONS FOR IMPROVEMENT OF MIS DATA QUALITY

93. Develop a multi-disciplinary MIS committee and working group process, with representation from all major disciplines and departments reporting MIS data. The committee and working group should be responsible for reviewing and verifying all statistical and financial data before it is finalized for the Trial Balance submission to the MoHLTC. This process should be followed quarterly for the quarterly submission, and annually for the full year submission.

94. Review the Trial Balance with respect to the allocation rules of OCDM to ensure that reporting practices are not leading to an inflation in HRSRH's ACPWC.

95. Fast track the implementation of the GRASP nursing management workload system in all inpatient units (including OR/PACU and Labour and Delivery), and in the major ambulatory care areas (e.g. Emergency, Dialysis, Day Surgery, and Oncology). Develop and implement processes for the regular validation of workload including inter-rater reliability and routine audits.

96. Implement valid workload measurement systems in all other patient care departments including Pharmacy, Respiratory Therapy, Non Invasive Cardiology, and Electrodiagnosis.

97. Use MIS data on a regular basis as part of departmental/cost centre reporting. Include wherever possible, comparative data from other organizations to allow managers to evaluate the validity and appropriateness of their financial and statistical data.

METHODOLOGY

OVERVIEW

This section provides detailed description of the approaches and tools, qualitative and quantitative, used to evaluate operational efficiency at HRSRH. While the various methodologies were implemented separately as part of the review, a strong effort has been made to integrate the findings wherever possible. The resulting recommendations and target savings were arrived at by combining the qualitative and quantitative evidence gathered from all components of the review. Special attention was given to findings that were confirmed independently by two or more separate components.

The following approaches and tools were used in reviewing operational efficiency at HRSRH:

- Clinical Efficiencies (Length of Stay) Benchmarking (using Discharge Abstract Data);
- Retrospective Chart Reviews;
- Concurrent Chart Reviews;
- Financial and Departmental Efficiency Benchmarking (using MIS data);
- Detailed Departmental Interviews;
- Follow up discussions with HRSRH personnel and external stakeholders; and
- Input from external expert advisors.

CLINICAL EFFICIENCY BENCHMARKING

OBJECTIVES OF CLINICAL BENCHMARKING

Clinical efficiency benchmarking analysis was utilized to compare HRSRH's utilization of acute inpatient capacity compared to that of a cohort of peer hospitals. This analysis was used to estimate opportunities for improved utilization of acute beds through length of stay reduction and increased day surgery utilization to average and benchmark (25th percentile) performance of peer hospitals. In turn, this information was used to identify programs for further review.

DATA

The clinical data requested from MoHLTC included the following data grouped to Plx 2000:

- 1997/98 - 2000/01 inpatient discharges and same day surgery cases for HRSRH, and
- 1997/98 - 2000/01 inpatient discharges and same day surgery cases for the selected cohort hospitals.

COHORT SELECTION

The cohort for the clinical benchmarking was based on the cohort for the Financial Benchmarking. To ensure that the cohort was adequately representative of the tertiary programs provided by HRSRH, the following hospitals were added to the cohort for selected tertiary programs:

- St. Michael's Hospital;
- The Ottawa Hospital;
- Hamilton Health Sciences Centre;
- Sunnybrook and Women's College Health Science Centre; and
- London Health Science Centre.

These hospitals were added to the clinical benchmarking cohort only for the following clinical programs:

- Neurosurgery;
- Cardio-thoracic Surgery;
- Vascular Surgery;
- Cardiology; and
- Trauma.

OVERVIEW OF CLINICAL BENCHMARKING METHODOLOGY

The benchmarking methodology includes typical and long stay outlier cases, as well as day surgery cases where a there remain a significant percentage of cases that are admitted. Specifically excluded from length of stay benchmarking are deaths, acute transfers, sign-outs and un-groupable cases.

Lengths of stay for inpatient cases that were discharged with lengths of stays greater than 365 days had their length of stay set to 365. This Winsorization of length of stay for very long cases ensures that program specific results are unduly influenced by a single or small number of patient episodes of care. Day surgery cases were assigned a length of stay of 0.25 days was assigned and included in the length of stay analysis by associating these cases with the equivalent inpatient CMG.

The benchmarking analysis is based on the following regression model for each CMG:

$$\log(LOS) = Plx + Age + Plx * Age + Cohort\ Hospital$$

The analyses recognizes the impact of complexity and age on length of stay, and also recognizes that the effects of complexity depend on, or interact with, patient age. The cohort hospital effects for each CMG are sorted and weighted by hospital case volumes to determine the 25th percentile and average hospital effects for each CMG. The average and 25th percentile hospital effects are then combined with the complexity and age group effects to estimate benchmark performance overall all levels of age and complexity for that CMG.

This approach to clinical benchmarking contrasts with approaches that create separate benchmarks for each CMG, complexity and age group. Benchmarking at this more detailed level results in a large number of benchmark cells with very small numbers of cases, so that clinical efficiency opportunity estimates are largely driven by random variations in clinical data. The regression approach pools performance across the CMG age groups and complexity levels to estimate average and benchmark performance.

Conservable day estimates are obtained by comparing the benchmarks to actual length of stay for all patients, and are summarized by program cluster and overall for HRSRH. Where HRSRH is better than benchmark performance, these efficiencies offset conservable days in other CMGs for each Program Cluster. This netting of efficiencies against estimated conservable days further reduces the chance that random variations have influenced the estimated opportunity.

RETROSPECTIVE AND CONCURRENT REVIEW

OBJECTIVES OF RETROSPECTIVE CLINICAL UTILIZATION REVIEW

Objectives of the Retrospective Clinical Utilization Review included:

- Assessing the HRSRH's provision of clinical service and conducting a retrospective audit of clinical practices using the InterQual ISD-AC™ 2001 Clinical Decision Support Criteria Review System to identify clinical practice and operational issues contributing to unnecessary utilization of acute care resources;

- Quantifying the proportion of unnecessary acute care admissions and potentially unnecessary continuing days of stay and determining the potential cost savings and site rationalization to be achieved through improved utilization;
- Measuring the timeliness of clinical service delivery;
- Evaluating the effectiveness of current efforts to reduce length of stay and resource consumption; and
- Identifying opportunities for improvement.

METHODS FOR THE RETROSPECTIVE CLINICAL UTILIZATION REVIEW

The same sample of health record charts reviewed for the Coding Validity Study was used for the Retrospective Clinical Utilization Review.

The selected charts were reviewed with the InterQual ISD-AC™ 2001 Clinical Decision Support Criteria Review System. Each day of stay for each chart was reviewed against the acute care criteria. Patient days that did not meet acute care criteria were referred to a physician reviewer for clinical validation. Only patient days validated by the physician reviewer as not meeting criteria were deemed non-acute. For this review, a practicing internist, psychiatrist, and pediatrician were used to clinically validate patient days.

In addition to reviewing the clinical appropriateness of the admission and subsequent patient days, charts were also reviewed for the timeliness of services and treatments required/requested for each patient, the timeliness of discharge planning efforts, and the quality of documentation found in the health record.

OBJECTIVES OF CONCURRENT REVIEW

The objectives of this process were to, on a concurrent basis, identify and evaluate:

- appropriateness of admission and setting and necessity of hospital stay;
- access and turnaround times for diagnostic and support services;
- utilization of standing orders and protocols;
- use of admission and discharge policies, care maps, and case management;
- team discussion about cases;
- discharge planning efforts;
- waiting list management practices; and
- linkages with community providers.

METHODS FOR THE CONCURRENT REVIEW

To further validate the findings of the Retrospective Clinical Utilization Review, a smaller sample of patient charts were reviewed concurrently. Over a ten-day period in April 2002, a review team reviewed 102 patient charts of cases for patients that were currently admitted. These cases had a length of stay greater than seven days and were selected by Program Cluster. Not all program clusters were reviewed. Programs Clusters were selected based on the results of the Retrospective Review. Specific Program Clusters reviewed are included in the departmental analysis.

The concurrent review allowed the nurse reviewer to speak directly with caregivers and charge nurses, as well as the ability to attend patient care rounds on the inpatient units when possible.

The concurrent review focused on three areas of concern, namely:

- documentation;
- discharge planning ; and
- support services.

Exhibit 23: Concurrent Review Cases by Program Cluster

PROGRAM CLUSTER	# OF CASES
Cardiology / Telemetry	10
Cardio / Thoracic	5
Vascular / Thoracic	5
General Medicine:	
Gastro / Hepato	8
Pulmonary	10
Medicine	10
Oncology	10
Psychiatry	6
Neurology / Neurosurgery	13
Orthopaedics	5
General Surgery	10
ALC	10
TOTAL	**102**

FINANCIAL BENCHMARKING

OBJECTIVES OF FINANCIAL BENCHMARKING

The main objective of the financial benchmarking analysis was to evaluate HRSRH's operational efficiency relative to a cohort of similar hospitals. The financial benchmarking provided a quantification of the potential opportunities for efficiency improvements at the hospital department level. Departments for which the financial benchmarking results suggested material savings potential were then evaluated in more detail through a departmental review process. The financial benchmarking was, therefore, a tool used to provide directional information on savings opportunities for further validation through the departmental review process.

DATA SOURCES

The following data sources were used in the financial analysis:

- 1997/98 - 2000/01 MIS Trial Balances (financial and statistical) for the cohort;
- 1997/98 - 2000/01 Ontario Cost Distribution Methodology files for the cohort;
- 1997/98 - 2000/01 CIHI inpatient and day surgery discharge abstract database files for the cohort (grouped to Plx 2000);
- 1998/99 – 2000/01 RUGs weighted days for the cohort; and
- March through December 2001/02 MIS Trial Balance for HRSRH.

COHORT SELECTION METHODOLOGY

To ensure meaningful benchmarking results, it was important to ensure that the cohort of hospitals to which HRSRH was compared against was representative of the most relevant factors that influence operational efficiency.

An initial short list of the largest 40 hospitals in Ontario (by weighted cases) was identified. The following criteria were then applied to select the final cohort list:

- Hospital Size: measured by total equivalent weighted cases and/or total operating budget;
- Level of Care Profile: proportion of acute inpatient cases that are primary, secondary, and tertiary;
- Service Recipient Profile: proportion of patient days that are acute, rehabilitation, or complex continuing care;
- Clinical Program Mix: proportion of patients in different program clusters;

- Multi-site Operation: number of geographically separate facilities operated by the hospital corporation; and
- Northern-ness and/or Sole Provider Status: the degree to which the hospital is geographically isolated from other hospitals providing a similar service mix.

Refer to Appendix VIII for a table providing the results of the ranking of the 40 hospitals according to these criteria. The closer the ranking to one (1), the more "like" HRSRH the cohort hospital is.

Following discussions with the Financial Working Group and the incorporation of other qualitative criteria in the selection process, a list was agreed upon, including the following hospitals.

- Hopital Regional De Sudbury Regional Hospital
- Credit Valley
- Humber River Regional
- Kingston General
- Kitchener Grand River Health Centre
- Lakeridge Health Corporation
- North Bay General
- North York General
- Peterborough Civic
- Rouge Valley Health System
- Royal Victoria (Barrie)
- Sault Area Hospitals
- St. Joseph's, Hamilton
- Thunder Bay Regional
- Trillium Health Centre
- William Osler
- Windsor Hotel Dieu Grace and Regional

Note: For certain patient care departments, the above hospital cohort was supplemented with additional teaching/tertiary hospitals to ensure that the benchmarks were an appropriate target for HRSRH. This was done for Cardiac Catheterization, the Cardiac ICU, Renal Dialysis, and Pharmacy.

OVERVIEW OF FINANCIAL BENCHMARKING METHODOLOGY

General Approach

The benchmarking methodology used in this review was based on an analysis of organizational efficiency indicators, starting with the highest level (e.g., Cost per Weighted Case) and drilling down to detailed departmental indicators of productivity and resource efficiency. The intent was to identify potential inefficiency at a high level and then investigate contributing factors at lower levels of detail, whenever necessary.

The MoHLTC uses the ACPWC as an indicator of the overall operational efficiency of the hospital. The ACPWC is influenced by several factors, including departmental efficiency and the utilization of services. The financial benchmarking framework addresses the efficiency and productivity of both direct care and overhead departments. Although the ACPWC is a measure of acute care performance, the benchmarking approach addresses the efficiency of the entire department, not only the activity related to the provision of acute care services.

The detailed departmental efficiency indicators made use of the financial and statistical detail available in the MIS Trial Balance and OCDM database. For all patient care departments, and some support departments, a cost per unit of activity was used as the principal measure of departmental efficiency (e.g., Laboratory cost per workload unit, Operating Room cost per surgical case, etc.). Further drill-downs were conducted to reveal details of the relative position of the departmental indicator (e.g., labour productivity, cost of labour, supply cost, etc.).

The following diagrams illustrate the relationship between departmental efficiency and the ACPWC.

Exhibit 24: Breakdown of the Actual Cost per Weighted Case

$$\text{Cost Per Weighted Case}^{*} = \frac{\text{Total Hospital Costs}}{\text{Total Weighted Cases}}$$

$$= \underset{\substack{\uparrow \\ \text{Financial} \\ \text{Efficiency}}}{\frac{\text{Cost}}{\text{Activity}}} \times \underset{\substack{\uparrow \\ \text{Utilization} \\ \text{(Clinical)} \\ \text{Efficiency}}}{\frac{\text{Activity Volume}}{\text{Case}}} \times \underset{\substack{\uparrow \\ \text{Acuity (Case Mix)}}}{\frac{\text{Case}}{\text{Weighted Case}}}$$

* Currently includes only acute, newborn, qualifying same day surgery and chronic care activity

Exhibit 25: Breakdown of Cost per Weighted Case - Example - Nursing Inpatient Unit

$$\frac{\text{Nursing Inpatient Unit Costs}}{\text{Total Weighted Cases}}$$

$$= \frac{\text{Cost}}{\text{Day}} \times \frac{\text{Days}}{\text{Case}} \times \frac{\text{Case}}{\text{Weighted Case}}$$

$$= \frac{\text{Compensation}}{\text{Day}} + \frac{\text{Supplies}}{\text{Day}} + \frac{\text{Equipment}}{\text{Day}} + \text{etc.}$$

$$= \underset{\substack{\text{Cost of} \\ \text{Labour}}}{\frac{\text{Cost}}{\text{Hour}}} \times \underset{\text{Productivity}}{\frac{\text{Hours}}{\text{Workload Unit}}} \times \underset{\text{Case Intensity}}{\frac{\text{Workload Units}}{\text{Day}}}$$

Benchmarking Indicators Used

Exhibit 26 illustrates the different levels of financial and statistical indicators used in the financial benchmarking. The first two levels (e.g. Corporate Efficiency and OCDM Level Breakdown) provide high level comparative information on the cost structure of the hospital. The third (Departmental) level has two categories: Patient Care and Administration and/or Support departments. For the patient care departments, two general types of indicators were calculated:

- department acute CPWC; and
- total cost per unit of departmental activity (e.g., per patient day, workload unit, outpatient visit, etc.)

Most of the Administration & Support departments do not usually statistics on activity. As such, the following indicators are used for these departments:

- department acute cost per weighted case (CPWC);
- total department costs as a percentage of total hospital direct costs; and
- where available, total cost per unit of department activity (e.g., food cost per patient meal day, housekeeping cost per square metre, etc.)

Note: The administration and support department cost as a percent of total hospital direct cost indicator can be skewed by inflated direct costs due to inefficiencies. As such, the department acute cost per weighted case was used to set savings targets.

A breakdown of the costs per unit of activity by expense type was also conducted to identify the type of expenses driving the indicator value (e.g., compensation, supplies, medical fees, etc.). Additionally, more detailed indicators of labour efficiency were calculated for a number of departments. These included labour productivity (i.e. workload unit per worked hour) and labour cost (i.e. compensation per paid hour).

Exhibit [illegible]: Levels of Financial Benchmark Indicator Calculation

Levels of Indicator Calculation		Types of Benchmark Indicators		
		Cost per Weighted Case (CPWC)	% of Total Hospital Costs	Cost per Activity
Corporate Efficiency		Total Inpatient CPWC Total Outpatient CPWC	Breakdown by Expense Type (Compensation, Medical Staff, Supplies, etc.)	
OHRS Level Breakdown		CPWC by Functional Area (Nursing, Diagnostic/Therapeutic, etc.)	OHRS Functional Centre as % of Total Costs (Nursing, Admin & Support, etc.)	
Department Level	Patient Care Departments	e.g., Acute Medical/Surgical Nursing CPWC e.g., Inpatient Lab CPWC etc.		e.g., Inpatient Nursing Cost per Patient Day e.g., OR Cost per Patient Visit e.g., Lab Cost per Workload Unit
	Administration & Support Departments	e.g., Health Records CPWC e.g., Biomedical Engineering CPWC	e.g., General Administration Cost as % of Total Costs e.g., Information Systems Cost as % of Total Costs	e.g., Housekeeping Cost per Sq. Metre e.g., Patient Food Cost per Meal Day

Expenses Excluded from Departmental Benchmarks

Inconsistencies among Ontario hospitals in the reporting of MIS financial and statistical data persist despite significant improvements over the last few years. These inconsistencies are particularly evident in the distribution of certain expenses to the functional centres.

It is important to ensure that differences in reporting do not confound the interpretation of the benchmarks as measures of operational efficiency. As such, the types of expenses that are known to be inconsistently distributed to the functional centres by Ontario hospitals were excluded from the costs in the departmental benchmarks. Many of these expenses were examined and compared separately using other types of indicators.

The following is a list of the expenses excluded from the departmental benchmarks:

- distributed depreciation;
- equipment rental/lease expenses;
- software amortization (licenses and fees);
- interest expenses; and
- drug expenses (pulled out of the patient care functional centres and reported in Pharmacy).

Additionally, laundry, food services, equipment maintenance, and other inter-departmental charges were re-allocated back to original service provider departments.

DETAILED DEPARTMENT AND PROGRAM REVIEWS

OBJECTIVES OF DEPARTMENTAL INTERVIEWS

A significant component of the operational review involved interviews with departmental managers and senior staff to gather relevant information about the operations of specific departments and programs. The interviews were conducted to gather information to investigate opportunities left by the benchmarking analysis. The objectives of these interviews were to:

- acquire a more detailed understanding of the operational environment of the departments/programs;
- identify any operational changes or management strategies that have been introduced recently and that may have an impact on the operational efficiency and effectiveness of the programs/departments.

- incorporate the perspectives of the department/program managers and personnel;
- evaluate the benchmarking analysis results and determine feasibility of efficiency targets; and
- identify high-level strategies for achieving efficiency targets.

SELECTION OF DEPARTMENTS AND PROGRAMS FOR INTERVIEWS

The financial and clinical benchmarking produced potential savings for each department and program at the [illegible] percentile benchmark performance. All departments with savings over [illegible] and all programs with savings over [illegible] beds were selected for interviews. Other quantitative and qualitative criteria were also used to select some programs and departments for detailed review.

INTERVIEW PROCESS

Interviews were scheduled to include the department or program managers and/or assistant managers, senior supervisors, and staff (where necessary). In most cases, one group meeting was conducted with all participants from the department or program. Follow-up sessions or phone calls were scheduled to obtain further details where required. Tours of specific areas were conducted to assist in understanding the functions of selected programs and departments.

Summary fact sheets were created for each department and program, containing financial and statistical information (e.g., FTEs, expenses, patient activity statistics, etc.) as well as performance indicators and corresponding benchmarks and estimated savings. These fact sheets were shared with the [illegible] staff and were used to help focus questions and direct discussions.

Discussions during the interviews focused on:

- **Developing the department/program profile** (e.g., department's organization, relationship with rest of the organization, recent history of department/program, current budget and staffing, workload/output for the current year, etc.);
- **Understanding the benchmarking results** (e.g., explaining the results, additional factors to consider in evaluating the department's/program's performance, etc.);
- **Identifying other issues that may have an impact on operations** (e.g., labour relations, supply chain issues, recruitment and retention, etc.);
- **Identifying recommended strategies** to enhance the operational efficiency of the department/program, at the department/program level and at the organization level.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

- For departments, savings were calculated by multiplying their total expenses by half of the percentage savings for the reviewed departments.
- For programs, savings were calculated in the same way, assuming that half of the percentage savings (through bed reductions and/or staff ratio and mix) of the reviewed programs could be achieved in the non-reviewed programs. Note that all programs were included in the retrospective review and clinical benchmarking, but not all programs underwent detailed interviews.

The following sections provide the hospital results of the operational efficiencies review.

CLINICAL EFFICIENCY BENCHMARKING FINDINGS

Exhibit 27 provides a summary of the clinical efficiency (LOS) benchmarking results for all program clusters at HRSRH. Note that the cases and days included in the table (as well as the program-specific tables later in this Chapter) are for typical and outlier cases, as atypical cases (deaths, transfers, and sign-outs) were excluded from the analysis.

HRSRH's LOS has been consistently above the cohort average LOS controlling for case mix, comorbidity and age. In 2000/01, HRSRH had a LOS that was 0.5 days per case longer than the cohort. The total conservable days at the expected (average) cohort LOS and the benchmark (25th percentile cohort) LOS in 2000/01 were 21,918 (16.7% of total days) and 43,319 (32.9% of total days), respectively.

Exhibit 27: HRSRH Clinical Efficiency Benchmarking Results for All Program Clusters by Fiscal Year

Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	40,514	43,320	44,527	44,311
HRSRH Average LOS	3.37	3.03	2.76	2.97
Cohort ELOS	2.86	2.63	2.41	2.47
Cohort Benchmark LOS	2.33	2.13	1.93	1.99
HRSRH Total Days	135,899	133,522	122,853	131,487
Cohort Days at Average LOS	115,152	111,452	107,269	109,569
Cohort Days at Benchmark LOS	94,672	90,292	86,152	88,168
HRSRH Conservable Days to Cohort Average	20,747	22,070	15,584	21,918
Equivalent Beds at 85% Occupancy	67	71	50	71
Percent Conservable Days to Cohort Average	15.3%	16.5%	12.7%	16.7%
HRSRH Conservable Days to Benchmark LOS	41,227	43,230	36,701	43,319
Equivalent Beds at 85% Occupancy	133	139	118	140
Percent Conservable to Benchmark LOS	30.3%	32.4%	29.9%	32.9%

RETROSPECTIVE CHART REVIEW FINDINGS

Based on the retrospective assessment of 420 records, the hospital has an opportunity to achieve a potential reduction of 49.8% in LOS. Key results included the following:

- 5.9% of admissions (25 cases) to hospital were identified as potentially avoidable admissions. These cases contributed to 278 potentially avoidable days (4.6% of the entire sample).[1] These were cases that did not meet the InterQual admission ISD-AC criteria.

- A further 2202 days, or 36.2%, of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.

- HRSRH identified 548 days as "Designated ALC" days (9%) of total days.

- The total potentially avoidable days identified by the review team, including the ALC days identified by HRSRH, was 49.8%. (e.g. 278 days not meeting admission criteria and 2202 days meeting discharge criteria from acute care).

- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 4.8 hours.

Of the 2480 potentially avoidable days identified by the review team, the alternate levels of care were:

  - 20% to Home (496 days),
  - 14.2% to Home Care (351 days),
  - 8% to Rehabilitation (198 days),
  - 26.8% to Long Term Care (LTC) (665 days),
  - 18.9% to Outpatient/Ambulatory (469 days),
  - 5.3% to Continuing/Complex /Chronic Care (131 days),
  - 6.7% to Palliative (165 days), and
  - 0.2% to Acute (5 days).

Exhibit 28: Analysis of Sample Total Patient Care Days – All Programs

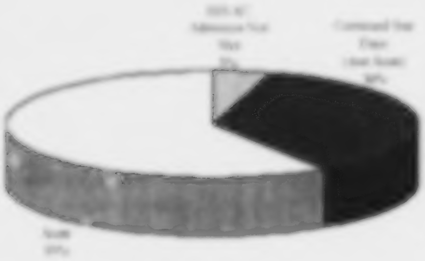
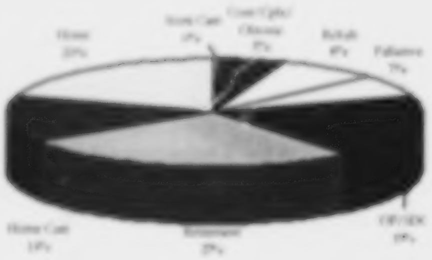


Exhibit 29: Total Potential Avoidable Days by Alternate Level of Care for Sample – All Programs



DELAYS OF SERVICE

During the review process, delays of service were also tracked and recorded. The greatest number of delays contributing to potentially avoidable days was the following:

Exhibit 30: Summary of Delay Factors

Service	**# of Incidents**	**Week Day Delays**	**Weekend Delay**	**Potential Avoidable Days**
Discharge Order Delay to Home	160	403	144	547
Discharge Plan Delay-Physician	31	279	107	326
Discharge Order Delay to Homecare	58	182	77	259
Discharge Plan Delay-Team	109	745	281	185
Waiting for ALOC Bed	36	352	151	461

Seventy two percent (72%) of the potentially avoidable days were related to the above 5 identified service delays. Discharge Order Delay to Home and Homecare refer to cases where the patient no longer required acute care and was clinically stable and functionally able to be discharged Home or Home with Homecare, the patient remained in hospital and there were no documented clinical reasons for the patient to remain in an acute care bed. Discharge Plan delay– Physician refer to cases were the attending physician was required to act on or participate in the discharge plan or planning process, the patient care team was unable to proceed without the physician's participation. Discharge Plan Delay – Team refer to patient days where the team needed to engage in discharge planning or to act on known information to proceed with active discharge planning. Waiting for ALOC bed refer to days where a patient was ready for discharge to an ALOC bed (mostly LTC), were on the waiting list and waited for an available bed to transfer to.

The Delays of Service of described above show that while there is significant room to improve utilization by improving the access to LTC beds (461 avoidable days), the majority of the days were within the control of the facility.

GENERAL FINDINGS

Documentation-Status/Assessment

The majority of the 420 cases in the retrospective review did not have a clearly documented treatment / discharge plan or any evidence of pro-active discharge planning. Physician orders were not dated or timed consistently. It appeared that some orders were dated incorrectly. Transcription of physician orders was not clear on many charts. There was no date / time or signature indicating the order was transcribed.

Documentation entries on Nursing clinical records and Physician progress notes were not always dated and timed. It appeared that some entries were dated incorrectly. Nursing histories were not completed on some charts. Consideration should be given to implementing a Braden scale assessment on admission.

Emergency Room documentation could be more detailed. Nursing documentation should include head to toe assessments. Vital signs and neuro vital signs could be documented more frequently. The Emergency clinical record was not always dated.

Home Care involvement was timely in majority of cases when requested, however documentation of services to be provided and the start date after discharge was not always documented.

Physiotherapists, Occupational therapists, and Speech therapists documented assessments and plan of action well however, there was little follow-up documentation of the progress of the patient on a regular basis. Often, follow-up documentation was several days later or on the discharge summary. In many cases the Speech therapists never saw the patient as it was documented the patient was put on a "wait list of first come first serve" basis. The wait for Occupational therapy was also evident as it was documented on several charts that due to workload the assessment of the patient would be delayed.

Documentation by the Nutritionists and Respiratory therapists and Pastoral Care was excellent.

There was a lack of "ALC Designation" noted for Rehab, LTC, Complex Continuing Care and Palliative Care.

The pre-operative assessments were completed well; however, there was a lack of documentation of discharge planning / outcomes expected in the patient records.

X-rays and tests take 2-7 days from date of order to date of transcription. Physicians often stated in their progress notes that they were waiting for a specific result or were requesting the results of a specific test.

There was one clinical pathway (Total Knee Replacement) found on the charts reviewed in this audit. There were many pre-printed Physicians' orders identified in the charts.

Discharge Planning-Status/Assessment

There was a lack of a written discharge plan resulting in unnecessary utilization of acute care resources. There was no evidence that High-risk patients were identified or seen in the Pre-Operative Clinic for Discharge Planning/Home Care/Rehabilitation. There was a lack of identification of high-risk patients in the Emergency Department for early discharge planning interventions. There was no evidence of a High-Risk Screening tool being used in the Emergency Department or on the units.

There was no evidence of multidisciplinary discharge planning rounds. There was very little documentation of the discharge plan by any of the multidisciplinary team members. It was unclear what the discharge goals were.

Social Work documentation was limited. It was not always evident that the Social Worker was involved even with the request from the physician for Social Work involvement for discharge planning.

Discharge planning for placement did not always specify when and where applications are sent. ALC patients on the "waiting placement list" were not consistently identified as ALC patients. There were potentially avoidable days identified using the InterQual ISD criteria screening tools whereby patients had met the discharge criteria and their care could have been managed at an alternate level of care (ALC), i.e. Rehabilitation, LTC, Complex Continuing Care, and Palliative Care. There were ALC patients identified that were not coded by Health Records. There were also patients designated ALC that, according to the InterQual criteria, were still acute.

ALC Days-Status/Assessment

There were potentially avoidable days identified using the InterQual ISD criteria screening tools whereby patients had met the discharge criteria and their care could have been managed at an alternate level of care (ALC), i.e. Rehabilitation, LTC, Continuing Complex Care, and Palliative Care.

Discharge planning for placement did not always specify when and where applications are sent.

ALC patients on the "waiting placement list" were not consistently identified as ALC patients. There were ALC patients identified by the Physician that were not coded by Health Records. There were also patients designated ALC that, according to the InterQual ISD criteria, were still meeting acute care criteria.

The Alternate Level of Care identification record was completed on several of the charts. Three variations of this form were used by organization during this review.

Home Care-Status/Assessment

Documentation in the retrospective analysis demonstrated the lack of requests for early intervention by Home Care. Generally the request occurred the day of or the day prior to discharge. Earlier requests/orders for Home Care will facilitate earlier discharges.

The Service Request form was on the chart but it was not always clear if the request was assessed and accepted by CCAC.

RECOMMENDATIONS BASED ON THE RETROSPECTIVE UTILIZATION REVIEW

98. Utilization Management / Concurrent Review: HRSRH should implement a Concurrent Review Utilization Management Program. The concurrent review process should be implemented in the medical and surgical programs as soon as possible using objective medical criteria. Hire case managers to help address the fragmentation of care provided to orphan patients and to improve overall clinical utilization. Case managers are to oversee and manage the delivery of the care provided while working collaboratively with the clinical staff and the entire healthcare team. Measurement of Turnaround Time of orders/services tests should be a major component of this program. Ensure an on going and standard reporting process to clinical teams of compliance to performance standards.

99. Revised Bed Management Process: A task force should be established with representation from each site and relevant programs to review the current Bed Management Guidelines / Policies and Procedures.

    Goals of this task force should include:

    - Improved patient flow to in-patient units of patients from the Emergency Department.
    - Identification of improvement of the placement of off-service patients.
    - Improvement of Discharge Time.

- Evaluate and monitor occupancy rates.

100.Discharge Planning Process: High-risk screens must be applied consistently in the Emergency Department and Pre-Op Assessment Clinic. Patients must be interviewed within established time frames. A standard of 24 hours after admission should be established for the documentation of a clear treatment / discharge plans by the MRP/ Attending Physician. Based on our chart review, we recommend the Social Worker role and the role of the Patient Flow Manager be evaluated as it relates to the subject of discharge planning. Further, we recommend that these roles have a clear mandate that is both measurable and effective.

101.ALC- Identification / Documentation: Since our review, the hospital has instituted a new ALC definition and form during November 2001. It is imperative that this process be effective to ensure consistent concurrent identification of patients that become ALC.

- o We recommend the hospital evaluate the implementation process of last fall and provide additional education as required.
- o Collect and monitor the number of ALC patients concurrently including placement classification.
- o Institute an on going monitoring / evaluation /reporting to programs and with supportive educational processes.

102.Investigation/Evaluation Of Current Chart Documentation Policies and Procedures: Create Documentation Improvement Working Group. The quality of documentation at Sudbury Regional Hospital is generally not of good quality. This evaluation was made by CHM Health Records Technicians, CHM Utilization Reviewers and hospital staff. Quality of documentation is directly related to effective utilization and communication as well as the quality of coding.

- o To assist in evaluating current documentation practices, with a goal to improving standards and ensuring that all stakeholders are represented, the consultants recommend the creation of a Documentation Improvement Working Group with specific targets for improvement.

103.Enhanced Clinical Information Feedback: Information reports must be provided to the Programs / Department Chiefs and physicians every quarter. In a collaborative manner, these reports are to support decision-making and ensure accountability. These reports must have a high degree of analysis in addition to the easy to read formats using graphics and benchmarked against Ontario Expected Length of Stay and Best Practices. These reports must be utilized by the Programs to establish annual utilization targets and improvements and be incorporated into the development of the Program budget. Discussion should take place of identifying physician names on reports as this is the practice of many Ontario hospitals as opposed the current practice of physician numbers.

104.Enhanced Coding Practice / Continuous Physician Education: As identified in the Coding Validity Study section of this report, an Action Plan should be developed into to address the recommendations.

- o It is important to obtain physician buy-in to improve utilization.
- o Educate the medical staff with respect to the importance of documentation and the resulting impact on the LOS, EDD, CMG, RIW, Plx and hospital funding.

CONCURRENT CHART REV IEW FINDINGS

A total of 102 charts were reviewed concurrently. The focus of the concurrent review was to validate the findings of the retrospective review. The retrospective review relied exclusively on the documentation in the chart. The concurrent review allowed the reviewer to discuss each case with caregivers while the patient was in the acute care setting. Where information was not documented or issues not commented on, the reviewer was able to gather information through contacts with the caregivers available.

The concurrent review focused on three areas of concern. Documentation, Discharge Planning and Support Services.

DOCUMENTATION

The following are the generalized findings for all charts reviewed:

- MD orders often had no date or time;
- transcribed orders often had no date or time;
- daily progress notes were missing date and time;
- too few physician progress notes;
- order sheets missing addressograph stamp;
- ALC form completion and designation not well done;
- tests - 2-7 days for printed results on patient chart; and
- dictated progress notes 2-3 days for printed copy to arrive on patient chart.

DISCHARGE PLANNING

The following are the generalized findings for all charts reviewed:

- lack of documented treatment and discharge plan on the patient chart;
- daily notes from professions do not address the discharge plan;
- little evidence of High Risk Screening process;
- use of day passes for acute care beds: Medicine/Surgery/Psychiatry;
- avoidable days found on tail end of stay;
- little proactive discharge planning evident;
- not all units have multidisciplinary rounds. Units at Memorial site have no Support Services available to attend rounds. No Occupational Therapy, Speech Therapy or

Nutrition coverage. There is 0.5 Social Work and 0.5 Physiotherapy coverage for Memorial site.

- where rounds occur, documentation is kept in a separate binder on the unit;
- rounds documentation is not discharge specific; and
- goals and plans are not well documented.

SUPPORT SERVICES

The following are the generalized findings for all charts reviewed:

- little documentation after initial notes by Physiotherapy, Social Work, Speech Therapy;
- CCAC do not document on chart;
- little documentation from Social Work, not clear when they are involved;
- respiratory Therapy and Pastoral care document well;
- long delays for Speech Therapy, Occupational Therapy, Social Work; and
- cases with no documentation, though a support service was involved.

The concurrent review strongly supports the findings of the retrospective review. There are numerous documentation issues that were evident in both reviews. The use of pre-operative days and day passes for acute care patients were found in both reviews as well. In the area of Discharge Planning, the concurrent review supports the findings of the retrospective review; LOS is often longer then necessary because discharge planning is not approached proactively.

The retrospective review found many cases where there were long delays in receiving service from physiotherapy, occupational therapy, social work, and speech therapy. While following cases concurrently, the review has found that there is limited coverage of these valuable resources to the inpatient population.

Overall, the concurrent review supports the findings of the retrospective review. There are many areas of clinical utilization improvement that are within the control of HRSRH and the medical staff.

CLINICAL PROGRAM AND DEPARTMENTAL REVIEWS

OVERVIEW

This section provides the detailed findings of the clinical program and departmental reviews integrating the information gathered from the concurrent and retrospective reviews, the clinical and financial benchmarking, and the interviews. Only departments and programs that underwent a detailed review (including interviews) are presented in this section. The benchmarking and utilization review information for the other programs and departments are provided in Appendix X and XI.

The following clinical programs included in this section:

- Cardiology and Cardio-Thoracic Surgery;
- General Medicine (Gastro-Hepatobiliary and Pulmonary);
- General Surgery;
- Mental Health;
- Neurology;
- Oncology;
- Orthopaedics;
- Trauma; and
- Urology.

The following departments are included in this section:

Patient Care Departments:

- Cardiac Catheterization Laboratory;
- Clinical Laboratory;
- Diagnostic Imaging;
- Emergency Services;
- Pharmacy;
- Renal Dialysis; and
- Respiratory Therapy.

Administration and Support Departments:

- Bio-Medical Engineering;
- Central Processing;
- Food Services;
- Health Records;

- Housekeeping;
- Information Systems;
- Materials Management; and
- Registration.

A number of generic strategies were identified through the review processes that apply to all programs. These strategies should be implemented to address the specific efficiency and utilization targets identified for the individual programs reviewed in detail, as well as the general efficiency targets for the other clinical programs. Many of the strategies are aimed not only at improving efficiency but also at increasing the effectiveness of service provision. The following is a description of these strategies:

- **Skill Mix.** There is an opportunity to optimize the scope of practice for Registered Nurses (RNs) and Registered Practical Nurses (RPNs). This is especially true for the surgical programs at HRSRH where the staffing ratios were found to be well above the norm for Ontario hospitals and where the skill mix was found to be heavily weighted towards RNs. Skill mix optimizing opportunities also exist in Clinical Laboratory.
- **Role of Unit Clerks.** There was inconsistency in the role of the unit clerk among the different floors and programs. This role should be redesigned through the development of consistent role descriptions that are complementary to the roles of the clinical managers.
- **Role of Clinical Managers.** The role of clinical managers should also be redefined such that it focuses more on the management of clinical service provision and less on the clinical support issues.
- **Clinical Pathways.** Programs should move aggressively toward the implementation of clinical pathways, based on established best practice patterns. The clinical pathways should be designed to incorporate a multi-disciplinary care approach.
- **Case Management.** There should be a focused transition to a case management model across programs. This will ensure appropriate utilization of acute services and prompt transfer between levels of care and effective linkages with community based services.
- **Program-specific Clinical Efficiency Targets.** Clinical efficiency targets should be established in each program. A process should be developed within the program management framework to continuously monitor clinical efficiency and implement strategies to maintain efficiency performance. The clinical (utilization) efficiency should always be tied to the financial (resource) efficiency of the related departments.
- **Length of Stay Monitoring.** A process should be established to effectively identify cases that are high risk for extended length of stay. This identification should be done as early as possible. Such cases should be monitored closely to ensure conditions are made available for prompt discharge when appropriate. A similar process should be set up for Alternate Level of Care (ALC) patients through enhancement of the discharge planning process.

- **External Linkages:** HRSRH should endeavour to work more effectively with its external partners in the delivery of comprehensive health care services. This includes the Community Care Access Centre (CCAC), long-term care facilities, referring hospitals, and other providers.
- **Decision Support Environment:** HRSRH should work towards creating an increasingly proactive decision support environment with an emphasis on the appropriate utilization and integration of clinical and financial indicators and benchmarks.
- **Bed Management:** Programs should implement a rigorous, dynamic bed management system to optimize access to medical and surgical beds. The system should include extensive physician participation.

In the following program-specific sections, opportunities are identified for achieving specific savings targets. These were developed based on an implementation of the following strategies:

- targeting expected LOS;
- reducing beds;
- realigning beds;
- reducing staff; and / or
- changing staff mix.

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CLINICAL PROGRAM FINDINGS

CARDIOLOGY AND CARDIAC THORACIC SURGERY

DEPARTMENTAL OVERVIEW

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BENCHMARKING ANALYSIS

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Exhibit 32: Cardiology CMG Program Cluster

	Year			
Data	97/98	98/99	99/100	00/01
Inpatient & Day Surgery Cases	3,019	2,992	3,748	4,138
¹Average LOS	5.9	6.5	6.1	4.9
Expected LOS	4.5	5.8	5.4	5.5
Benchmark LOS	3.5	3.1	2.8	2.5
Total Days	17,806	17,278	15,347	18,782
Expected Days	14,304	14,011	12,908	14,356
Benchmark Days	11,460	12,086	10,482	10,443
Conservable Bed Days vs Expected	2,790	3,267	2,179	4,427
Equivalent Beds at 85% Occupancy	8.7	8.3	7.0	14.3
Percent Conservable Days vs Expected	16%	19%	14%	24%
Conservable Bed Days vs Benchmark	5,896	5,292	4,865	8,339
Equivalent Beds at 85% Occupancy	19.0	17.1	15.7	26.9
Percent Conservable Days vs Benchmark	33%	30%	32%	44%

¹Day surgery cases counted as 0.25 days per case

Exhibit 33: Cardiac Thoracic CMG Program Cluster

	Year			
Data	97/98	98/99	99/100	00/01
Inpatient & Day Surgery Cases	647	670	645	697
¹Average LOS	9.3	8.6	9.2	10.1
Expected LOS	8.2	7.7	8.0	8.4
Benchmark LOS	7.3	6.9	7.4	7.2
Total Days	6,055	6,058	5,882	6,114
Expected Days	5,335	5,360	5,166	5,089
Benchmark Days	4,855	4,882	4,776	4,394
Conservable Bed Days vs Expected	720	698	716	1,025
Equivalent Beds at 85% Occupancy	2.3	2.3	2.3	3.3
Percent Conservable Days vs Expected	12%	12%	12%	17%
Conservable Bed Days vs Benchmark	1,200	1,176	1,106	1,720
Equivalent Beds at 85% Occupancy	3.9	3.8	3.6	5.5
Percent Conservable Days vs Benchmark	20%	20%	19%	28%

¹Day surgery cases counted as 0.25 days per case

ISSUES IDENTIFIED FROM INTERVIEWS AND CONCURRENT REVIEW

Note: 10 Cardiology Cases and 5 Cardio-thoracic cases were reviewed concurrently.

Length of Stay

- The unit does not have control of the ten short stay beds after 3:30p.m. As a result, these beds may be occupied by patients from the emergency department (e.g., pneumonia, pancreatitis, stroke, etc.).
- The program frequently admits patients to the 5th floor the day before surgery, to ensure that a bed is available for the day of surgery.
- There are challenges with Operating Room (OR) scheduling resulting from patients that require immediate surgery following angiography.
- Pacemaker insertions are currently performed in the OR. A separate dedicated clinic is recommended to handle pacemaker insertions and free up OR time.
- Although the Cardiac Care Network (CCN) data indicate that HRSRH's post-operative complexity is comparable to that of other cardiac centres in the province, HRSRH does not have access to the same level of resources because of its non-teaching status and geographic location.
- Coronary Artery Bypass Graft (CABG) patients are admitted the day before surgery for pre-operative testing. Following surgery, these patients remain in the ICU/Step down unit for 2 to 3 days. Although patients are usually extubated within 12 to 24 hours following the surgery, they remain in the ICU/step down unit until intravenous inotropes are discontinued. Best practice would allow for earlier discharge from the critical care environment.
- In the fall of 2001, the services of the 0.5 FTE patient flow manager were discontinued.
- Patients scheduled for diagnostic procedures on the 2nd floor often take up a bed on the 5th floor while waiting for their procedure.
- Some out of town patients are admitted to hospital for pre angiography work ups because their local communities lack the necessary resources.

Staff

- There are inadequate allied health support staff resources to cover the needs of these patients (e.g., limited Physiotherapy, no Occupational Therapy or Clinical Nutrition coverage, only 0.5 FTE Social Work). There is also no Speech Therapy coverage at Memorial site; patients are seen on a "first come first served" basis. Social Work was not requested for discharge planning in the concurrent review cases.
- There is limited CCAC involvement. The CCAC staff is not permitted to document in the patient chart, which limits communication of patients' placement status.
- Front line managers spend the majority of their time dealing with staffing and scheduling issues, with less time available to focus on patient care issues, bed flow issues, and standardization of policy and procedures among sites.
- Ward clerks are responsible for payroll input but differing practices exist across sites.

Quality of Care

- There is a lack of clear discharge and admission criteria for cardiology and cardiac surgery patients, especially as it relates to diagnostic procedure patients and post acute care linkages for out-of-town patients.
- There are no regularly held multi-disciplinary rounds on the units.
- Care related to epidurals and BIPAP (bilateral positive airway pressure) is provided in the intensive care units only, thus affecting LOS in the more resources intensive critical care settings.
- Four of the five cardio-thoracic cases in the concurrent review waited 5 to 7 days for surgery: one patient waited five days for angiography. One case waited seven days for surgery and had daily day passes.

RETROSPECTIVE CHART REVIEW FINDINGS FOR CARDIOLOGY

Based on the retrospective assessment of 85 records, this program cluster has an opportunity to achieve a potential reduction of 42% in LOS. Key findings include:

- 2.3% of admissions (2 cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 18 potentially avoidable days (2.2% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 325 days, or 40.5%, of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 75 days as "Designated ALC" days (9.3%) of total days.
- The total potentially avoidable days identified by the review team, including the ALC days identified by HRSRH was 343, or 42.7% of total days reviewed. (i.e., 18 days not meeting admission criteria and 325 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 4.0 hours.

Of the 343 potentially avoidable days identified by the review team, the alternate levels of required were:

- 32.9% to Home (113 days);
- 14.3% to Home Care (49 days);
- 1.2% to Rehabilitation (4 days);
- 30.6% to Long Term Care (105 days);
- 19.5% to Outpatient/Ambulatory (19 days); and
- 1.5% to Acute (5 days).

Exhibit 34: Analysis of Sample Total Patient Care Days – Cardiology

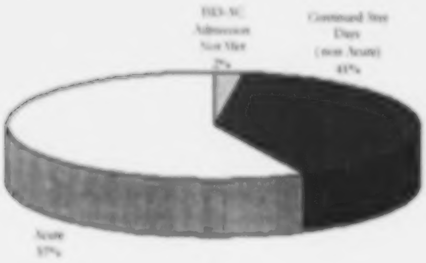
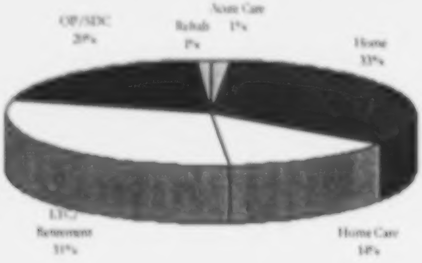


Exhibit 35: Total Potential Avoidable Days by Alternate Level of Care for Sample – Cardiology



RETROSPECTIVE CHART REVIEW FINDINGS FOR CARDIO-THORACIC

Based on the retrospective assessment of 21 records, this program cluster has an opportunity to achieve a potential reduction of 26.6% in LOS. Key findings include:

- No admissions to hospital were identified as potentially avoidable admissions to hospital. All cases met the InterQual admission ISD-AC criteria.
- 74 days, or 26.6%, of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified no days as "Designated ALC" days.
- The total potentially avoidable days identified by the review team was 74 or 26.6% of total days reviewed.
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 2.2 hours.

Of the 74 potentially avoidable days identified by the review team, the alternate levels of care require were:

- 78.4% to Home (58 days);
- 12.2% to Home Care (9 days); and
- 9.5% to Outpatient/Ambulatory (7 days).

Exhibit 36: Analysis of Sample Total Patient Care Days – Cardio/Thoracic

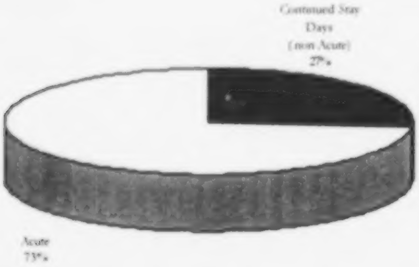
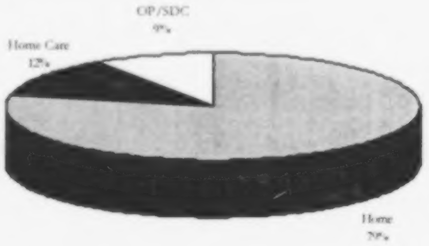


Exhibit 37: Total Potential Avoidable Days by Alternate Level of Care for Sample – Cardio/Thoracic



RECENT INITIATIVES

- A system is being implemented to track off-service patients and, eventually, to reduce or eliminate off-servicing.
- The program has good linkages with cardiac rehabilitation services. Automatic referrals are done for all patients with cardiac surgery, pacemakers, CHF, unstable angina, atrial fibrillation, post myocardial infarction, angioplasty, and angiography.
- A pilot study examining the use of menu lists for coding CABG cases was initiated in January 2002. CABG cases were under-coded prior to the study. Since the study, the program has continued to utilize menu lists to ensure accurate coding practices.

RECOMMENDATIONS

105.Adjust staffing for net savings of $705,300.

106.Admit open-heart surgery patients on the day of the surgery. Perform all pre-operative work on a pre-admission (outpatient) basis.

107.Reassign 10 inpatient beds on the second floor as holding beds (non-inpatient) for cardiac catheterization patients.

108.Develop strict admission and discharge criteria for the Cardiac ICU.

109.Increase allied health resources to the clinical programs through a re-allocation of staff from the centralized departments; include physiotherapists, physiotherapy assistants, occupational therapists, and social workers.

110.Explore the feasibility of implementing remote angiography pre-procedure work ups to reduce length of stay and unnecessary admissions.

GENERAL MEDICINE

DEPARTMENTAL OVERVIEW

- There are three General Medicine units at HRSRH providing care for a wide range of medical patients:
    - 8th Floor at the Laurentian Site consists of 39 beds; with 4 flex beds and 2 over-census beds.
    - 4th Floor at the Laurentian Site consists of 36 beds, with 6 palliative beds, 4 flex beds, and 2 over-census beds.
    - 4ABC at the SJHC consists of two in-patient units – 4A and 4BC totaling 62 beds and 6 flex beds.
    - Across all three General Medicine units, there are a total of 14 flex beds and 7 over-census beds. The budget does not include flex and over-census beds, which interferes with the operation of the medical day area when in use.

- Staffing:
    - 8th Floor Laurentian Site:
        - Staff mix: RNs and RPNs
        - 1 Clinical Leader: Mon. – Fri. 8 hr. days
        - RNs - 17 FT / 8 part-time
        - RPNs – 7 FT / 10 part-time

        SW – 1 Full time
        PT – 3 days / week
        OT – 1 Full time shared
        Nutrition/SLP – shared

    - 4th Floor Laurentian Site:
        - Staff mix: RNs and RPNs
        - RNs – 15 FT / 10 part-time
        - RPNs – 4 FT / 10 part-time

        SW – .5 position
        PT / OT – 1 FT
        Nutrition/SLP – shared

    - 4A/BC SJHC Site:
        - Staff mix: RNs and RPNs
        - 2 Clinical Leaders
        - RNs – 33 FT / 20 part-time
        - RPNs – 11 FT / 11 part-time

        Nutrition/SLP – shared
        SW – .6 position
        PT – .85 position
        OT – .8 position

BENCHMARKING ANALYSIS

- The benchmarking analysis focused on the gastro/hepatobiliary and pulmonary program clusters, because these clusters comprised the greatest conservable days.
- Volumes in 2000/01 (% of HRSRH in brackets):
    - Gastro: 5,871 (13.2%) cases and 8,947 (6.8%) days

  - Pulmonary: 1,690 cases (3.8%) and 11,309 (8.6%) days

- Trends:

  - Gastro: Relatively stable volumes. ALOS steady at approximately 1.5.
  - Pulmonary: Decreasing volumes. ALOS jump to 6.7 days in 2000/01 from 6.2 in 1990/00.

- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):

  - Gastro: 5 (17%) at ELOS; 10.6 (37%) at benchmark
  - Pulmonary: 7.5 (21%) at ELOS; 9.7 (27%) at benchmark

Exhibit 38: Gastro/Hepatobiliary CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	5,873	5,989	6,226	5,871
*Average LOS	1.5	1.5	1.3	1.5
Expected LOS	1.4	1.3	1.2	1.3
Benchmark LOS	1.1	1.1	0.9	1.0
Total Days	9,021	8,752	8,107	8,947
Expected Days	8,453	8,049	7,754	7,393
Benchmark Days	6,713	6,325	5,875	5,657
Conservable Bed Days to Expected	567	703	352	1,554
Equivalent Beds at 85% Occupancy	1.8	2.3	1.1	5.0
Percent Conservable Days to Expected	6%	8%	4%	17%
Conservable Bed Days to Benchmark	2,308	2,427	2,231	3,290
Equivalent Beds at 85% Occupancy	7.4	7.8	7.2	10.6
Percent Conservable Days to Benchmark	26%	28%	28%	37%

*Day surgery cases counted as 0.25 days per case

Exhibit 39: Pulmonary CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	1,820	1,966	1,867	1,690
*Average LOS	6.5	6.5	6.2	6.7
Expected LOS	5.5	5.2	5.2	5.3
Benchmark LOS	5.0	4.6	4.6	4.9
Total Days	11,793	12,871	11,486	11,309
Expected Days	10,048	10,199	9,645	8,976
Benchmark Days	9,083	9,019	8,553	8,301
Conservable Bed Days to Expected	1,745	2,672	1,840	2,333
Equivalent Beds at 85% Occupancy	5.6	8.6	5.9	7.5
Percent Conservable Days to Expected	15%	21%	16%	21%
Conservable Bed Days to Benchmark	2,710	3,852	2,932	3,008
Equivalent Beds at 85% Occupancy	8.7	12.4	9.5	9.7
Percent Conservable Days to Benchmark	23%	30%	26%	27%

*Day surgery cases counted as 0.25 days per case

RECENT INITIATIVES

- Monthly meetings are conducted with the Administrative Director, Medical Director, Chief of Medicine, and Chief Nursing Officer primarily to discuss budget issues.
- A cost centre analysis is received on a monthly basis for the budget year to date; however, there is no linkage of costs to activity.
- A monthly Utilization Committee meeting is conducted to discuss LOS, ALC, and overall volumes.

ISSUES IDENTIFIED FROM INTERVIEWS AND CONCURRENT REVIEWS

Note: 10 General Medicine cases, 10 Pulmonary cases, 8 Gastro/Hepatobiliary cases and 10 ALC Designation cases were reviewed concurrently.

Costs

- At SJHC, there are 9.2 FTEs on WSIB or modified work programs. Injuries were largely the result of significant shoulder and back strain injuries.
- The perception exists that the recent increase in total number of FTEs has reduced overtime expenditures but increased sick time costs.
- Funding is only available for 4 flex beds in the system. There is no additional budget allocated to additional flex beds or over-census beds.

- There have been increased costs for education and overtime due to Meditech system and Workload Measurement tool implementation.
- The units have reported that they are functioning in a deficit position.

Length of Stay

- There are large numbers of medical patients on other wards ("off-service" medical patients) and in the emergency department, which result in significant delays, or cancellations of surgeries.
- The same physician group that consists of GPs, Internists, Surgeons, and Hospitalists serves all three sites. It is difficult for the physicians to efficiently conduct rounds on three sites while maintaining office hours.
- It is assumed that the recent change in the long-term care waiting list policy will increase LOS. Once patients refuse a long-term care bed, they are often not charged the full per diem rate during their hospital stay.
- Since August 2001, the CCAC no longer accepts patients requiring dressing changes, catheter care, ostomy care, etc. Some of these policies are being re-evaluated and may be reversed.
- CCAC staff are not permitted to document in the patient char, which limits communication of patients' placement status.
- The nursing home policy is to accept only one transfer per day.
- There is limited ambulance availability for transfers out of hospital to LTC facilities and to other hospitals – one per day. In contrast, the private company that was hired during the recent strike provided 4 to 5 transfers per day. In the concurrent review of pulmonary, one patient waited three days for an ambulance transfer to the referral hospital.
- One case in the Gastro/hepatobiliary concurrent review experienced delays due to psychiatry consultations.
- The lack of clinical pathways throughout the General Medicine program was noted from the concurrent review.

Staffing

- There are insufficient allied health resources on the units.

    - The General Medicine concurrent review found one case where there was a delay of one month for a swallowing assessment by Speech Therapy. There was also no documentation by speech therapy for one out of ten cases of ALC designation patients.
    - Six out of ten cases of the pulmonary concurrent review found that Social Work was not involved. In one case in the concurrent review, Social Work was requested early for discharge planning, but placement was not initiated for 2 to 3 weeks.
    - All eight cases of the gastro/hepatobiliary concurrent review revealed that Social Work was not requested for discharge planning. It was also found that there was no early involvement by Physiotherapy and Occupational Therapy.
    - For one case in the ALC Designation Patients concurrent review, there was a 2 to 4 week gap in documentation by physiotherapy in the progress notes.

- There have been four changes in the Administrative Director position for this area since the implementation of the program management model in January 1999.
- Some units continue to use old "crank" beds that can cause injuries to nurses. There are shortages of equipment such as blood pressure cuffs and mechanical lifts.
- The large number of modified work employees causes morale problems with other staff because the perception exists that staff on modified work programs are assigned optimal shifts.
- General Medicine units have a high proportion of new graduate nurses that move on to other units within 12 to 18 months, resulting in high turnover of staff. As a result, the unit is constantly trying to recruit and orient new staff. Aside from graduation time, recruitment is particularly challenging since nurses are rarely recruited from outside the Sudbury area.
- Since nurses often have to accompany patients to tests, including those at other sites, there are often long absences from the unit, which increases the workload for the nurses who remain on the unit. The long absences are often exacerbated by delays in the ambulance service.

Quality of Care

- One patient from the concurrent review of the ALC designation patients was given day passes while awaiting placement.
- One patient from the gastro/hepatobiliary concurrent review had day passes while waiting for outpatient diagnostic testing.
- One patient from the general medicine concurrent review was admitted inappropriately for diagnostic work ups that could have been done as an outpatient.

Other

- Since the Pharmacy is only open from 7 a.m. to 4:30p.m. nurses spend time walking to the night cupboard to obtain medications for their patients.
- When the emergency department "clears" the department at the end of every shift, patients are sometimes inappropriately admitted to medical units for 6 to 12 hours. Admissions often occur during shift changes, which result in overtime for the medical staff.
- Reductions in support staff have resulted in nurses assuming their tasks.
- The new Ontario Nursing Association contract's third weekend rule (i.e. the hospital must pay a premium for working three weekends consecutively) will increase staffing expenditures. However, the unit has developed permanent weekend worker positions to mitigate these costs.

RETROSPECTIVE CHART REVIEW FINDINGS FOR GENERAL MEDICINE

Based on the retrospective assessment of 30 records, this program cluster has an opportunity to achieve a potential reduction of 74.8% in LOS. Key findings include:

- 20% of admissions (2 cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 15 potentially avoidable days (7.6% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 133 days, or 67.2% of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 62 days as "Designated ALC" days (31%) of total days.
- The total potentially available days identified by the review team, including the ALC days identified by HRSRH, was 148, or 74.8% of reviewed days. (e.g., 15 days not meeting admission criteria and 133 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 2.0 hours.

Of the 148 potentially available days identified by the review team, the alternate levels of care required were:

- 1.4% to Home (2 days);
- 13.5% to Home Care (20 days);
- 5.4% to Rehabilitation (8 days);
- 73.6% to Long Term Care (109 days); and
- 6.1% to Outpatient / Ambulatory (9 days).

RETROSPECTIVE CHART REVIEW FOR GASTRO/ HEPATOBILIARY

Based on the retrospective assessment of 20 records, this program cluster has an opportunity to achieve a potential reduction of 51.9% in LOS. Key findings include:

- 5.0% of admissions (1 case) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 5 potentially avoidable days (2.1% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 116 days, or 49.8% of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 51 days as "Designated ALC" days (21.9%) of total days.
- The total potentially available days identified by the review team, including the ALC days identified by HRSRH, was 121 or 51.9% of reviewed days. (e.g., 5 days not meeting admission criteria and 116 days meeting discharge criteria from acute care).

- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was [illegible] hours.

Of the [illegible] potentially avoidable days identified by the review team, the alternate levels of care required were:

- [illegible]% to Home ([illegible] days);
- [illegible]% to Home Care ([illegible] days);
- [illegible]% to Long Term Care ([illegible] days); and
- [illegible]% to Outpatient/ Ambulatory ([illegible] days).

RETROSPECTIVE CHART REVIEW FINDINGS FOR PULMONARY

Based on the retrospective assessment of [illegible] records, the program cluster has an opportunity to achieve a potential reduction of [illegible]% in LOS. Key findings include:

- [illegible]% of admissions ([illegible] cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to [illegible] potentially avoidable days ([illegible]% of the program sample). These were cases that did not meet the InterQual admission SI/IS AC criteria.
- A further [illegible] days, or [illegible]% of continued hospital stay days, were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual SI/IS AC screening discharge criteria tool.
- The Program identified [illegible] days as "Designated ALC" days ([illegible]%) of total days.
- The total potentially avoidable days identified by the review team, excluding the ALC days identified by the HRSRH, was [illegible] or [illegible]% of reviewed days (e.g., [illegible] days not meeting admission criteria and [illegible] days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was [illegible] hours.

Of the [illegible] potentially avoidable days identified by the review team, the alternate levels of care required were:

- [illegible]% to Home ([illegible] days);
- [illegible]% to Home Care ([illegible] days);
- [illegible]% to Continuing Complex/ Chronic Care ([illegible] days);
- [illegible]% to Long Term Care ([illegible] days); and
- [illegible]% to Outpatient/ Ambulatory ([illegible] days).

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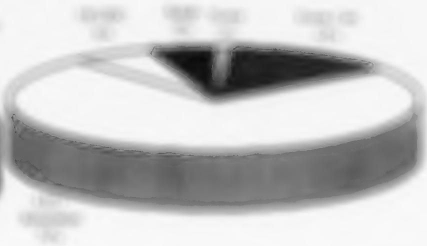

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GENERAL SURGERY

DEPARTMENTAL OVERVIEW

- 2BC / 3D / 5A at the LHC site are inpatient surgical units offering services in general surgery, gynecology, otolaryngology and plastic surgery. Most surgeries are seen preoperatively through the Preadmission Clinic and appropriate diagnostic testing and teaching completed through outpatient visits. Generally, surgical services are provided postoperatively as patients enter hospital through the day surgery unit as same day admissions.

- Same day admission for surgeries has increased.

- 80% of surgeries done in day surgery.

- Colon surgeries admitted one day pre-operatively.

- There are a total of 36 Surgical beds on 2BC, 17 beds on 3D and 6 beds on 5A at the LHC site.

- 2BC / 3D admits patients off service throughout the day to relieve stress from the emergency department. The 17 Surgical beds on 3D and the 6 Surgical beds on 5A are now occupied by GP and Internal Medicine service patients. On average, 25 to 30% of patients in the unit are off service.

- Staffing 2BC:

  - All RN staff - 70% FT/30% PT
  - Monday to Friday

    - 7 x 12 hour RNs on days
    - 1 x 12 hour desk nurse (modified worker)
    - 1 x 7.5 hour Clinical Leader
    - 1 x 7.5 hour ward clerk
    - 5 RNs + 7.5 hour desk nurse on nights

  - Weekends

    - 6 x 12 hour RN on days
    - 5 x 12 hour RN on nights
    - 1 x 7.5 hour ward clerk

  - PT, OT, SW - shared with other units
  - Respiratory Therapist - shared

- Staffing 3D:

  - RNs and RPNs
  - 7 days per week

    - Days: 2 x 12 hour RNs; 2 x 12 hour RPNs
    - Nights: 2 x 12 hour RNs; 1 x 7.5 hour RPN

  - PT, OT, SW – shared with other units

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):
  - 5,681 (12.8%) cases and 11,434 (8.7%) days
- Trends:
  - Increasing volumes. Decreasing ALOS.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - 2.5 (7%) at ELOS; 7.6 (20%) at benchmark

Exhibit 40: General Surgery CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	4,324	4,752	5,417	5,681
*Average LOS	2.5	2.3	1.9	2.0
Expected LOS	2.5	2.3	1.9	1.9
Benchmark LOS	2.2	2.0	1.5	1.6
Total Days	10,726	10,983	10,112	11,434
Expected Days	10,716	10,915	10,233	10,671
Benchmark Days	9,463	9,558	8,158	9,090
Conservable Bed Days to Expected	9	68	-121	763
Equivalent Beds at 85% Occupancy	0.0	0.2	-0.4	2.5
Percent Conservable Days to Expected	0%	1%	-1%	7%
Conservable Bed Days to Benchmark	1,262	1,425	1,954	2,344
Equivalent Beds at 85% Occupancy	4.1	4.6	6.3	7.6
Percent Conservable Days to Benchmark	12%	13%	19%	20%

*Day surgery cases counted as 0.25 days per case

ISSUES IDENTIFIED FROM INTERVIEWS AND CONCURRENT REVIEW

Note: 10 General Surgery cases were reviewed concurrently.

Cost

- There is inadequate funding to perform the required volumes of endoscopies.

Length of Stay

- There has been an inability to discharge all surgical and off-service patients to community due to CCAC cutbacks. This has resulted in patients staying longer for treatment and education. The CCAC no longer accepts patients requiring dressing changes, catheter care, or ostomy care.
- The unit lacks full control of surgical beds. The unit has already lost 13 beds to medicine on 3D. Technically, these beds are considered Surgical but are filled by Medical patients. The 6 Surgical beds on 5A are also occupied with Medical patients. The mix of off-service patients with surgical patients has increased activity in the admission, transfer, and discharge of patients to keep the ER from backing up. Since the RN staff continues to work on separate units despite being one cost centre/one staff, there is increased stress, lower morale, increased turnover, higher orientation costs, and a lack of skill base. In December 2001, 3D was redefined from a designated acute surgical unit to one in which the patients are primarily medical. The staff mix for 3D has subsequently been changed to reflect the type of patients occupying 3D. Additionally, 2BC takes the majority of surgical patients. Staffing has also been changed to reflect the needs of the unit. As a result, there has been an improvement in overtime and sick time.
- General surgery is considered a high priority service so surgeries are rarely cancelled. However, bed closures are more frequent and seem to last longer. These decisions are often made without any input from the surgeons and have a significant impact on their income. Such practices make it more difficult to recruit new surgeons to HRSRH.
- In the concurrent review, there was one case where surgery was delayed for 5 to 6 days. The review also found elective cases being admitted one day pre-operatively.
- The waitlists for colonoscopy are very long. It takes 8 to 12 weeks to see a physician and there is another wait to get the scope done.

Staffing

- There is inadequate Respiratory Therapy coverage for patients with tracheostomies.
- The concurrent review found that in all ten cases reviewed, there were no requests for physiotherapy or occupational therapy. When social work was requested, there were delays in seeing the patient. In one case, there was a 9-day delay waiting for social work and a further delay because placement forms were not completed until the following week.

Quality of Care

- The equipment available on units is inadequate (e.g., blood pressure cuffs and hoyer lifts).
- Supplies are often not available for nurses (e.g., bedpans, linen). Supplies are maintained off-site and not always readily available. Nurses spend more time searching for supplies

and borrowing from other areas. Although the respective departments (purchasing/SPD) are notified several times there is often no response.

RETROSPECTIVE CHART REVIEW FINDINGS FOR GENERAL SURGERY

Based on the retrospective assessment of 36 records, this program cluster has an opportunity to achieve a potential reduction of 28.6% in LOS. Key findings include:

- 5.5% of admissions (2 cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 46 potentially avoidable days (5.9% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 177 days, or 22.7% of continued hospital stay days, were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 50 days as "Designated ALC" days (6.4%) of total days.
- The total potentially avoidable days identified by the review team, including the ALC days identified by HRSRH, was 223 or 28.6%of reviewed days. (*e.g.*, 46 days not meeting admission criteria and 177 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 4.0 hours.

Of the 223 potentially avoidable days identified by the review team, the alternate levels of care required were:

- 10.8% to Home (24 days);
- 29.6% to Home Care (66 days);
- 18.4% to Rehabilitation (41 days);
- 1.8% to Long Term Care (4 days);
- 17.5% to Outpatient/Ambulatory (39 days);
- 1.1.7% to Continuing/Complex Chronic Care (25 days); and
- 10.3% to Palliative (23 days).

Exhibit 47: Analysis of Sample Total Patient Care Days – General Surgery

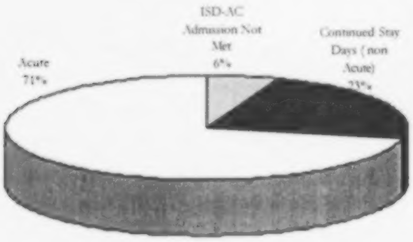
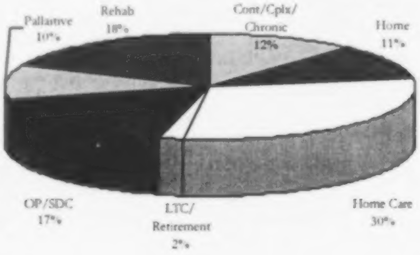


Exhibit 48: Total Potential Avoidable Days by Alternate Level of Care for Sample – General Surgery



RECENT INITIATIVES

- The increase in the number of medical patients in surgical beds has increased staff sick time. Since 3D has become a unit for "off-service" medical patients, the staffing has been increased to 2 FTE RNs and RPNs have been added. Both overtime and sick time has since decreased.
- 92% patients come through Pre-admission clinic for General surgery.
- Workload measurement and Meditech education for staff.
- Clerks are copying orders.

RECOMMENDATIONS

119.Adjust staffing on 2BC for net savings of $495,900.

120.Aggressively develop and implement clinical pathways based on best clinical practices.

121.Continue to maximize the number of ambulatory/day surgeries.

122.Explore opportunities to close beds on weekends.

123.Educate physicians in completing face sheet.

124.Perform more endoscopic work in the Endoscopy unit, as opposed to the Operating Room-.

MENTAL HEALTH

DEPARTMENTAL OVERVIEW

- Psychiatry services are provided in a 24-bed Schedule I inpatient unit located at the St. Joseph's Healthcare site.
- HRSRH has an interdependent relationship with the Northeast Mental Health Centre (NEMHC), which operates 44 beds that provide both acute, and community mental health services at the Algoma site. The NEMHC is the lead agency for local and district mental health local lead for Timmins, Sault Ste Marie, and Sudbury. There is a good sense of teamwork both within HRSRH and with the NEMHC. Bed rounds involving staff from the Algoma site are conducted every Monday and Friday.
- The Psychiatric Intensive Care Unit (PICU) is located at the Algoma site.
- There is no clear delineation as to what types of patients should be admitted to each location. If patients require secure facilities, they have to be admitted to the Algoma site due to limitations in the physical facility at the SJHC site.
- The HSRC directives call for 39 acute care beds; NEMHC is increasingly becoming more specialized in long-term psychiatry care.
- Until September 2001, NEMHC managed HRSRH inpatient beds.
- Staff at HRSRH
    - 1 Manager
    - 1 Clinical Leader (Monday – Friday) – RN who also provides direct patient care and all group sessions
    - 3 Attending Physicians
    - 3 RNs (12 hours) on days and 2 RNs on nights.
    - 0.7 FTE OT (also serves all of Memorial)
    - 0.4 FTE Pastoral Worker
    - 0.5 FTE Social Worker (other 0.5 FTE dedicated to the Crisis Team)
    - 1.5 FTE Psychology staff
    - 1.0 FTE Unit Coordinator
    - 2 RPNs (8 hours) on days and evenings. 1 RPN on nights.
- Single department of psychiatrists:
    - 3 attending MDs at HRSRH who rotate consultation coverage daily. Also attending MDs rotate with other psychiatrists annually.
    - 8 psychiatrists for Algoma
    - NEMHC provides 4 General Practitioners to cover psychiatry call after 5pm.

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):

  - 832 (1.9%) cases and 11,870 (9.0%) days

- Trends:
  - Generally increasing volumes. ALOS has remained relatively stable over the last two years.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - 8.3 (22%) at ELOS; 13.5 (35%) at benchmark

Exhibit 49: Psychiatry CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	666	677	721	832
*Average LOS	17.2	15.8	14.1	14.3
Expected LOS	13.2	11.7	10.7	11.2
Benchmark LOS	10.7	9.6	8.8	9.2
Total Days	11,445	10,670	10,197	11,870
Expected Days	8,781	7,931	7,723	9,295
Benchmark Days	7,094	6,488	6,328	7,685
Conservable Bed Days to Expected	2,664	2,739	2,474	2,575
Equivalent Beds at 85% Occupancy	8.6	8.8	8.0	8.3
Percent Conservable Days to Expected	23%	26%	24%	22%
Conservable Bed Days to Benchmark	4,352	4,182	3,869	4,185
Equivalent Beds at 85% Occupancy	14.0	13.5	12.5	13.5
Percent Conservable Days to Benchmark	38%	39%	38%	35%

*Day surgery cases counted as 0.25 days per case

ISSUES IDENTIFIED FROM INTERVIEWS

Cost

- HRSRH psychiatry is over budget by $30,000 due to increased acuity in December 2001 (e.g., average age 68 and increased co-morbidity) and management changes (e.g., additional 0.5 FTE).
- Outpatients who require electroconvulsive therapy (ECT) are admitted due to unavailability of service in the community. ECT service is available to 5 patients per day, 3 times per week. Availability of ECT may significantly impact length of stay for inpatients.

- Sudbury has two Schedule I facilities, however, they are influenced by the fact that two HSRC directives, those related to Sudbury and North Bay, affect the provision of mental health services in the area.

Length of Stay

- There is a need for increased community services. NEHMC had proposed reducing acute care beds, officially funding PICU at Algoma, and increasing/developing an 18-place community (transitional care) program. The MoHLTC disagreed because the intention was that NEMHC was to focus on specialized long-term care.
- HRSRH lacks the necessary resources to fully develop acute care services.
- The lack of community/outpatient services negatively impacts the HRSRH emergency department.
- There is a lack of an effective Day Hospital.
- Some psychiatrists admit patients from the emergency department as ALC.
- The fact that psychiatrist coverage changes daily is problematic.

Staffing

- Social work coverage of the inpatient mental health unit was recently reduced. This decision was made by the Social Workers with limited consultation with the IPC or the mental health program.
- RNs are responsible for observation every 30 minutes and close observation every 15 minutes. They also conduct several unit searches. The use of professional nursing staff for this function is questioned.
- While the availability of psychiatrists after hours is an ongoing issue, it is recognized that these physicians are providing extensive service to a large geographic area (including Manitoulin Island) and covering all inpatient and community services, as well as the Crisis Team.

Quality of Care

- After 5 p.m., psychiatrists are unavailable (covered by 1 of 4 GPs). As a result, patients who require a psychiatry consultation will often wait in the emergency department or be admitted inappropriately. It is recognized that psychiatry does see all referrals within 24 hours.
- There is excessive utilization of Form I in the emergency department.
- There is minimal programming for inpatients due in large part to lack of resources such as Social Workers, Recreational Therapists, etc.
- Off-service patients are "rostered" and managed during bed rounds.

RETROSPECTIVE CHART REVIEW FINDINGS FOR PSYCHIATRY

Based on the retrospective assessment of 30 records, this program cluster has an opportunity to achieve a potential reduction of 36.5% in LOS. Key findings include:

- 3.3% of admissions (1 case) to hospital was identified as a potentially avoidable admissions to hospital. This case contributed to 47 potentially avoidable days (4.8% of the program sample). This case did not meet the InterQual admission ISD-AC criteria.
- A further 305 days, or 31.6% of continued hospital stay days, were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 84 days as "Designated ALC" days (8.7%) of total days.
- The total potentially avoidable days identified by the review team, including the ALC days identified by HRSRH was 352 or 36.5% of reviewed days. (e.g., 47 days not meeting admission criteria and 305 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 18 hours.

Of the 343 potentially avoidable days identified by the review team, the alternate levels of care required were:

- 22.2% to Home (78 days);
- 0.3% to Home Care (1 day);
- 34.7% to Long Term Care (122 days); and
- 37.8% to Outpatient/Ambulatory (133 days).

Exhibit 50: Analysis of Sample Total Patient Care Days - Psychiatry

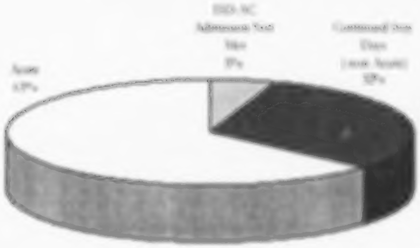
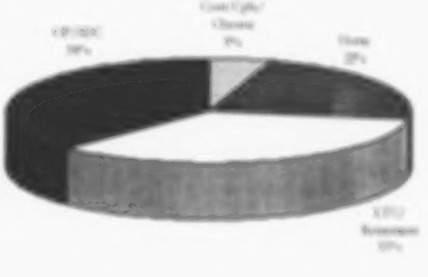


Exhibit 51: Total Potential Avoidable Days by Alternate Level of Care for Sample – Psychiatry



RECENT INITIATIVES

- ALC designation was started in October 2001.
- The Crisis team (staffed by RNs) is now in place 24/7 to support emergency department.

RECOMMENDATIONS

125. Maintain crisis team to support emergency department at HRSRH, and explore best practices in terms of staffing.

126. Explore opportunity to establish a Psychiatric Emergency Department located at the Algoma site for medically cleared patients.

127. Ensure effective collaboration between HRSRH and NEMHC.

NEUROLOGY

DEPARTMENTAL OVERVIEW

- At HRSRH, there are no designated neurology beds. Neurology patients are usually admitted into General Medicine beds (8th Floor Laurentian, 6th Floor Laurentian, or 4A/B/C SJHC).

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):
  - 570 (1.3%) cases and 5,300 (6.2%) days
- Trends:
  - Generally increasing volumes. ALOS decreased to 9.3 in 2000/01.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - 3.3 (19%) at ELOS; 6.1 (36%) at benchmark

Exhibit 52: Neurology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	500	515	536	570
*Average LOS	16.6	15.8	10.6	9.3
Expected LOS	9.7	9.1	7.9	7.5
Benchmark LOS	7.0	6.9	6.2	6.0
Total Days	8,164	8,108	5,690	5,300
Expected Days	4,867	4,666	4,249	4,275
Benchmark Days	3,509	3,520	3,313	3,411
Conservable Bed Days to Expected	3,297	3,442	1,441	1,025
Equivalent Beds at 85% Occupancy	10.6	11.1	4.6	3.3
Percent Conservable Days to Expected	40%	42%	25%	19%
Conservable Bed Days to Benchmark	4,655	4,588	2,377	1,889
Equivalent Beds at 85% Occupancy	15.0	14.8	7.7	6.1
Percent Conservable Days to Benchmark	57%	57%	42%	36%

*Day surgery cases counted as 0.25 days per case.

ISSUES IDENTIFIED FROM INTERVIEWS AND CONCURRENT REVIEW

Note: 8 Neurology cases were reviewed concurrently.

Length of Stay

- Since HRSRH does not have a Neurologist on staff, patients who require a neurology consultation are often kept in hospital to await the weekend neurologist travelling from either London or Kitchener.
- Several patients do not have a designated most responsible physician which often delays their discharge. For example, patients will stay an extra couple of days because their anticoagulation monitoring cannot be followed in the community.
- According to the current admission practices of the rehabilitation program, the physicians will only accept new patients to rehabilitation beds on Fridays. If the patient is not ready on that day, transfer to the rehabilitation program is delayed for at least another week.
- There are several CCAC issues that delay the discharge of neurology patients. There is limited communication of the patient's status with respect to placement coordination services. This is exacerbated by the fact that CCAC staff cannot document in the inpatient charts and there are no CCAC services available over the weekend. In addition, the poor bus transportation system prevents patients from accessing the downtown Victorian Order of Nurses clinic.
- There are changing requirements for LTC selection. Each patient is allowed only three selections and must specify the type of accommodation (private vs. semi-private/ward) of care desired within the facility. If a patient specifies three different types of accommodation within one facility, that would constitute the three selections. If the patient refuses an acceptance for a facility (e.g., Due to cost), the patient is off the list for six months. In the past, patients were placed on facility specific wait lists regardless of type of accommodation, thereby allowing more flexibility.
- At HRSRH, there is a high incidence of young stroke patients. Discharge for these patients is particularly challenging because they reside in remote communities that lack the necessary resources (e.g., Physiotherapy).
- The concurrent review found that neurology patients experienced frequent delays with receiving rehabilitation assessments. There were two cases that met the criteria for rehabilitation; they were not given an ALC designation.

Staffing

- HRSRH does not have a permanent neurologist on staff. The last neurologist retired in September 2001. Although there is a neurologist in the community with hospital privileges, he currently does not see hospital patients nor take call.
- There are two London neurologists who conduct inpatient consultations at HRSRH on Friday and operate the outpatient clinic on Saturday. Occasionally, one neurologist comes from Kitchener.
- Occasionally internists handle stroke management at HRSRH. However, the internists are uncomfortable with managing complex neurology patients.
- There are inadequate allied health support resources for neurology patients (e.g., physiotherapy, occupational therapy, speech therapy, etc.). The concurrent review noted that there were 3 to 5 week delays for speech therapy. There is, however, fairly good social work coverage. The concurrent review found that there was inconsistent

[illegible]

Quality of Care

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RETROSPECTIVE CHART REVIEW FINDINGS FOR NEUROLOGY

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- [illegible] to Home ([illegible] days);
- [illegible] to Home Care ([illegible] days);
- [illegible] to Rehabilitation ([illegible] days); and
- [illegible] to Long Term Care ([illegible] days).

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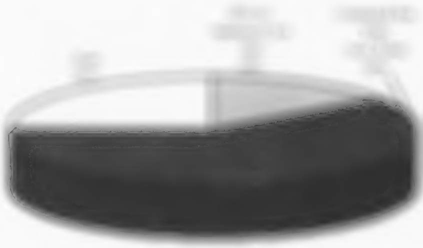

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ONCOLOGY

DEPARTMENTAL OVERVIEW

- The 18-bed Oncology unit is located on the 4th floor medical floor of the Laurentian site. The Oncology unit shares the 4th floor Laurentian site with 4 Medical Day Unit beds, 31 General Medicine beds, and 6 Palliative beds. The unit provides patient care to both medical and radiation patients with emphasis on those patients requiring continuous chemotherapy and long-term radiation therapy when the patient does not fit the criteria for the Lodge associated with the Cancer Treatment Centre. The Oncology program is linked to the Regional Cancer Centre.
- Currently, 90% of radiation therapy is done on an outpatient basis.
- Palliative patients are currently cared for on Medical units.
- Staffing:
  - 15 Full Time and 12 Part Time RNs certified to give chemotherapy
  - Physiotherapist – 2 (covers medicine and oncology)
  - Occupational Therapist – 1 FT
  - Social Worker – 1 FT
  - 2 clinical assistants: 1 radiation and 1 chemotherapy

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):
  - 1,269 (2.9%) cases and 6,835 (3.7%) days
- Trends:
  - Increasing cases, decreasing days and ELOS.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - 1.4 (9%) at ELOS; 5.0 (32%) at benchmark

Exhibit 55: Oncology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	934	1,012	1,199	1,269
*Average LOS	4.4	4.9	4.1	3.8
Expected LOS	4.6	4.5	3.5	3.5
Benchmark LOS	3.3	3.0	2.2	2.6
Total Days	4,084	4,939	4,970	4,835
Expected Days	4,342	4,569	4,167	4,414
Benchmark Days	3,092	3,033	2,641	3,278
Conservable Bed Days to Expected	-258	370	803	421
Equivalent Beds at 85% Occupancy	-0.8	1.2	2.6	1.4
Percent Conservable Days to Expected	-6%	7%	16%	9%
Conservable Bed Days to Benchmark	992	1,906	2,330	1,558
Equivalent Beds at 85% Occupancy	3.2	6.1	7.5	5.0
Percent Conservable Days to Benchmark	24%	39%	47%	32%

*Day surgery cases counted as 0.25 days per case

ISSUES IDENTIFIED FROM INTERVIEWS AND CONCURRENT REVIEW

Note: 10 Oncology cases were reviewed concurrently.

Costs

- There have been increased costs for education and overtime due to Meditech system and Workload Measurement tool implementation.
- Due to the specialized chemotherapy training required, there is a long orientation period for new staff nurses.
- The Stem Cell program provides services to approximately 8 cases annually. The number of cases now exceeds this number. Although the length of stay is now shorter, HRSRH is negotiating reimbursement with the CCO. The current reimbursement is $2000/case, which does not sufficiently cover all costs.

Length of Stay

- Since the Cancer Care Ontario (CCO) funded Lodge closes on weekends and holidays, the oncology unit and the 4 bed Medical day unit are responsible for the care of cancer patients during this time.

- Care for oncology patients is sometimes transferred to GPs or hospitalists. As a result, oncologists do not always have full responsibility for the length of stay for all patients who are abstracted as oncology.
- The ambulance service to outlying areas is poor. In contrast, the private company used during the strike took more patients per day and were willing to take two patients concurrently.
- The concurrent review showed that one case waited for one week for an Urology consultation.

Staffing

- The concurrent review found that home care services were often not requested until the day of discharge and that there was limited Social Work involvement with discharge planning.

Quality of Care

- Patients from outlying areas must travel long distances for oncology care. There is also insufficient physician and other support services for these patients that usually result in a longer length of stay.
- The continuity of care is negatively impacted by the high turnover of physicians in the North.
- Bone Marrow biopsies cannot be done on the weekend, which may further delay care.
- The concurrent review found one case that waited two weeks for a Rehabilitation consultation. Another case met the criteria for Rehabilitation but was not given an ALC designation.
- The concurrent review found that patients were often admitted 1 to 3 days before their chemotherapy was initiated. In the meantime, patients were given day passes.

Other

- The unit has noted an increasing complexity of patients on the unit, primarily by the combination of chemotherapy and radiation treatments in more protocols.

RETROSPECTIVE CHART REVIEW FINDINGS FOR ONCOLOGY

Based on the retrospective assessment of 17 records, this program cluster has an opportunity to achieve a potential reduction of 50.8% in LOS. Key findings include:

- 17.6% of admissions (3 cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 36 potentially avoidable days (9.7% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 153 days, or 41.1%, of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.

- The Program did not identified any days as "Designated ALC" days (0%) of total days.
- The total potentially avoidable days identified by the review team were 189 or 50.8% of reviewed days. (e.g., 36 days not meeting admission criteria and 153 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 1.5 hours.

Of the 189 potentially avoidable days identified by the review team, the alternate levels of care required were:

- 4.8% to Home (9 days);
- 4.2% to Home Care (8 days);
- 3.2% to Continuing/Complex/Chronic Care (6 days);
- 56.6% to Palliative (107 days); and
- 31.2% to Outpatient/Ambulatory (59 days).

Exhibit 56: Analysis of Sample Total Patient Care Days – Oncology

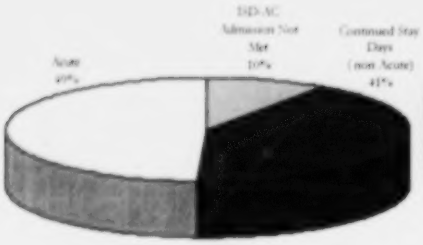
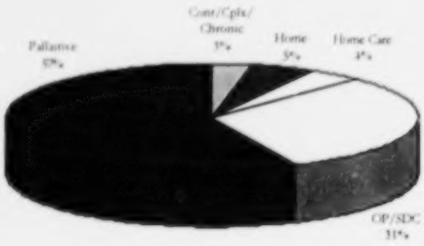


Exhibit 57: Total Potential Avoidable Days by Alternate Level of Care for Sample - Oncology



RECENT INITIATIVES

- Physician education regarding ALC designation and co-payment.
- Workload measurement recently implemented.
- Clinical Pathway development in progress.
- Physicians education regarding completion of discharge summaries to ensure more accurate coding.

RECOMMENDATIONS

134.Increase ambulance service to HRSRH, for transfers, emergencies, and repatriation.

135.Continue to educate physicians regarding coding and documentation practices.

136.Aggressively develop and implement clinical pathways based on current best practices.

137.Attempt to identify barriers to discharge at admission and involve social work as early as possible.

ORTHOPAEDICS

DEPARTMENTAL OVERVIEW

- The Orthopaedic inpatient program is a 29-bed unit located on 5BC at the SJHC site. Elective surgical patients are seen through the Pre-admission Clinic and appropriate diagnostic testing and teaching is completed through outpatient visits. Emergency admissions constitute the remainder of the patient population on the unit requiring orthopaedic care and/or surgical intervention. Most elective patients are admitted the day of surgery.
- Occupancy averages at 87% (excluding summer bed closures) but includes weekend closures of six beds whenever possible. 5BC also admits off-service patients, primarily family practice, internal medicine, and general surgery.
- The Orthopaedic program is associated with the Canadian Arthritic Program. The program is unique in that it services an elderly population, which has significant joint problems, due to mining. Orthopaedic procedure rates for the Sudbury/Manitoulin area have increased between 1997 and 2000, to be at (hip) or above (knee) provincial average. More specifically the number of MoHLTC funded hip procedures (142) equals 2000/01 total number of procedures from Sudbury/Manitoulin, which have achieved average population-based rate. For the number of MoHLTC funded knee procedures (243) equals Sudbury/Manitoulin total number (244) while population-based rate for knee replacement exceeds provincial average.
- Staffing:
  - All RNs - 68% Full Time/32% Part Time (1999 – 30%FT/70% PT and 2000 – 80% FT/20% PT)
  - Physiotherapist – 1 FTE Monday – Friday and .5 FTE Saturday
  - Physiotherapy assistant – 1.5 FTE Monday – Friday
  - Occupational Therapist - 0.8 FTE
  - Social Worker – 1 FTE shared with another unit

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):
  - 2,895 (6.5%) cases and 10,141 (7.7%) days
- Trends:
  - Fluctuating volumes. ALOS fluctuating around 3.5 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - 5.6 (17%) at ELOS; 12.4 (38%) at benchmark

Exhibit 58: Orthopaedics CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	2,513	2,961	3,060	2,895
*Average LOS	3.8	3.5	3.2	3.5
Expected LOS	2.9	2.8	2.6	2.9
Benchmark LOS	2.2	2.1	2.0	2.2
Total Days	9,588	10,280	9,672	10,141
Expected Days	7,360	8,156	8,088	8,418
Benchmark Days	5,505	6,220	6,261	6,295
Conservable Bed Days to Expected	2,228	2,124	1,584	1,723
Equivalent Beds at 85% Occupancy	7.2	6.8	5.1	5.6
Percent Conservable Days to Expected	23%	21%	16%	17%
Conservable Bed Days to Benchmark	4,083	4,060	3,411	3,847
Equivalent Beds at 85% Occupancy	13.2	13.1	11.0	12.4
Percent Conservable Days to Benchmark	43%	39%	35%	38%

*Day surgery cases counted as 0.25 days per case

ISSUES IDENTIFIED FROM INTERVIEWS AND CONCURRENT REVIEW

Note: 5 Orthopaedic cases were reviewed concurrently.

Cost

- Higher staffing levels during restructuring may have increased expenditures.
- The volume of admissions and the unit's proximity to the emergency department has increased the number of off-service patients admitted to surgical beds. Surgeries are generally not cancelled and cause a daily challenge to place morning orthopaedic surgery admissions. This has created more stress and workload for staff. In addition, staff is constantly trying to facilitate patient placement. These patients ultimately increase costs for the orthopaedic program.
- There have been increased costs for education and overtime due to Meditech system and Workload Measurement tool implementation.
- The HRSRH number of procedures in 2001/02 exceeded MoHLTC funded activity resulting in a $350,000 deficit.

Length of Stay

- Transferring patients back to their referring hospitals for convalescence has not been an issue. However, there has been an inability to discharge all surgical and off-service patients to the community, due to the lack of resources through the CCAC. The CCAC has also altered their discharge criteria and made significant cutbacks, which make it more difficult to place patients. As a result, patients are now experiencing longer lengths of stay.

- Home Care does not take referrals for hip replacements at the time of admission, which further delays the discharge planning process.
- The care of elderly patients with fractured hips is transferred to the family physician and once these patients are stable, they are transferred to a Medical bed. The length of stays for these patients tends to be long.
- Very few orthopaedic patients are accepted by the rehabilitation unit due to the selection criteria, which focuses on strokes and amputees.
- There is no sub-acute unit designated for convalescence.
- The difficulty in accessing OR time due to the long waitlist has resulted in 25% to 30% of patients going elsewhere, particularly Toronto. A significant proportion of hip/knee replacement cases from Manitoulin are done elsewhere. Reasons cited include the unwillingness of Manitoulin physicians to refer patients to HRSRH and the lack of capacity in HRSRH to provide additional service to Manitoulin due to existing volume exceeding funded capacity. The ICES Atlas demonstrates that Sudbury/Manitoulin are under-serviced compared to other regions in the province.

Staffing

- The concurrent review found:
  - Delays in requesting physiotherapy involvement post-operatively.
  - Although occupational therapy was requested, there was no documentation on the chart.
  - Social work involvement in discharge planning was well documented.

Quality of Care

- Patient rooms and bathrooms are too small for all equipment, patient transfers and movement, particularly with patients using walkers and wheelchairs

RETROSPECTIVE CHART REVIEW FINDINGS FOR ORTHOPAEDICS

Based on the retrospective assessment of 29 records, this program cluster has an opportunity to achieve a potential reduction of 61% in LOS. Key findings include:

- 10.3% of admissions (3 cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 28 potentially avoidable days (6.2% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 247 days, or 54.8% of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 40 days as "Designated ALC" days (8.8%) of total days.

- The total potentially avoidable days identified by the review team, including the ALC days identified by HRSRH, was 315 or 61% of reviewed days. (i.e. 28 days not meeting admission criteria and 247 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 1.8 hours.

Of the 275 potentially avoidable days identified by the review team, the alternate levels of care required were:

- 7.6% to Home (21 days);
- 14.5% to Home Care (40 days);
- 24.7% to Rehabilitation (68 days);
- 31.6% to Long Term Care (87 days);
- 8.7% to Outpatient/Ambulatory (24 days); and
- 12.7% to Palliative (35 days).

Exhibit 59: Analysis of Sample Total Patient Care Days – Orthopaedics

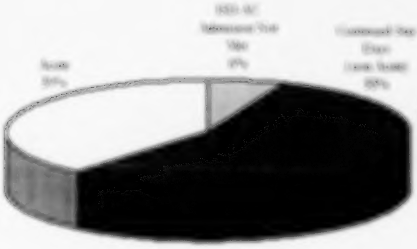
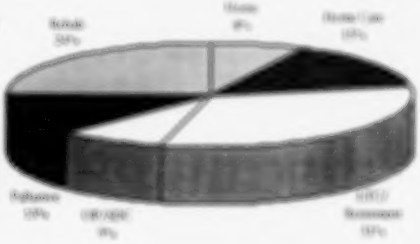


Exhibit 60: Total Potential Avoidable Days by Alternate Level of Care for Sample – Orthopaedics



RECENT INITIATIVES

- The Absenteeism Program has been very successful for the Orthopaedic service.
- A proposal has been sent to the MoHLTC to increase the budget for hip and knee replacement surgeries. Traditionally, more surgeries are performed than budgeted for, thus requiring supplementary funding from the operational budget. Budgeting for the funded volumes is not sufficient to cover costs.
- There is good teamwork between physicians and nurses to manage the number of surgeries and workload.
- Beds are rarely closed with only seasonal downsizing.
- Measuring physiotherapy delays and its impact on LOS.

- Implementation of workload measurement tool.
- Good education for nurses on lifting and transferring patients with physiotherapist.
- Developed and implemented 7 day clinical pathway for Total Knee Replacement surgery.
- Plan to implement new strategy of 0900hr discharge time, which will assist in bed availability for same day admission surgeries.

RECOMMENDATIONS

138. Adjust staffing for net savings of $329,600.

139. Reduce 5 beds over a period of one year. Associated savings based on $250 per day nursing unit cost will be $556,700.

140. Improve bed management practices to aggressively identify and manage discharge barriers.

141. Limit the number of off-service patients admitted to surgical beds.

142. Aggressively develop and implement clinical pathways.

143. Implement a Utilization Management tool.

144. Given the resources required to support total joint replacement procedures, HRSRH needs to analyze the appropriateness of surgery performed within the hospital to demonstrate population need in excess of average Ontario rate.

    - It may be that average Ontario rates are too low
    - Substantially lower than UK, Scandinavia, New Zealand, USA (knee)
    - Ontario procedures have been found to be appropriate

- Establish natural market share areas for HRSRH

    - Negotiate possible flow of patients from Algoma, Nipissing, Timiskaming, Manitoulin, Sudbury Region to HRSRH rather than Toronto
    - Some of these regions are underserved for hip/knee surgery
    - Requires regional registry and regional coordination of service to distribute MOH funded capacity

TRAUMA

DEPARTMENTAL OVERVIEW

- HRSRH is one of 11 lead trauma hospitals in Ontario. The purpose of the lead trauma hospital program (LTH) is to ensure high level care for patients with serious trauma. The MoHLTC funds the LTHs for 24/7 availability of the Trauma Team Leader (TTL), program management and data collection.
- HRSRH reports 180 to 200 trauma cases per year with an Injury Severity Score (ISS) >12. However, the MoHLTC reports the actual fundable trauma cases as follows:

  - 1998/99 = 164
  - 1999/00 = 118
  - 2000/01 = 169
  - 2001/02 projected = 180

- Staffing:

  - 0.5 FTE Medical Director
  - 1 FTE Coordinator
  - 1 FTE Data Analyst
  - 1 FTE Secretary
  - This service reports to the Medical and Administrative Director of Critical Care and is funded as a separate vote item.

- HRSRH is a designated LTH that is funded to provide trauma care to patients in the Northeast. The Northeast is comprised of four networks:

  - Network 6, North Bay = Timiskaming, Englehart, Mattawa, Sturgeon Falls
  - Network 10, Timmins = Kirkland Lake, Kapuskasing, Cochrane, Smooth Rock Falls, Chapleau, Hearst
  - Network 9, Sault Ste. Marie = Wawa, St. Joseph's Island, Thessalon
  - Network 11, Sudbury = Parry Sound, Manitoulin, Espanola, Blind River, Elliot Lake

- Over the past two to three years, concerns have been expressed as to the ability of HRSRH to provide the appropriate level of service associated with a LTH. A large number (80-110 cases/year) bypass Sudbury. Some of these cases are appropriately directed elsewhere (i.e., paediatric, neurosurgical cases, burns). However, there is agreement that a multiplicity of factors has influenced HRSRH's ability to provide the high level of care required. They include:

  - The issue of recruitment and retention of some specialists (neurosurgeons, lack of thoracic surgeons – now remedied, and plastic surgeons);
  - A lack of available critical care and/or ward beds;
  - Issues related to the role of the TTL;
  - Issues related to the functioning of the Emergency Department (ED); and
  - Issues related to land/air transportation.

- The consultants recognize that improvements have been made, specifically with respect to the role of the CTC and to operational improvements within the ED. However, concerns continue to be expressed by the [illegible] and other hospitals in the Northeast.
- Currently, HRSRH has a "no refusal" policy for patients from within Network 13. However, evidence suggests that HRSRH has not been able to provide [illegible] care to all of Northeastern Ontario over the past two years[17]. As well, the number of patients from Network 13 (Muskoka/Huntsville) has been steadily increasing and has placed significant pressures on the already stretched system.

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets)
  - [illegible] ([illegible]%) cases and [illegible] ([illegible]%) days
- Trends
  - Steady volumes – ALOS fluctuating around [illegible] days
- Conservable Beds in 2000/01 (% of total Program Conservable beds in brackets)
  - [illegible] ([illegible]%) at HRSRH; [illegible] ([illegible]%) at benchmark
- Benchmarking data must be interpreted with caution due to differing definitions of trauma

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[17] A review of the lead trauma hospital program – Northeastern Ontario Emergency Health Services Advisory Committee, February 2002

[illegible]

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	[illegible]	[illegible]	[illegible]	[illegible]
¹Average LOS	[illegible]	[illegible]	[illegible]	[illegible]
Expected LOS	[illegible]	[illegible]	[illegible]	[illegible]
Benchmark LOS	[illegible]	[illegible]	[illegible]	[illegible]
Total Days	[illegible]	[illegible]	[illegible]	[illegible]
Expected Days	[illegible]	[illegible]	[illegible]	[illegible]
Benchmark Days	[illegible]	[illegible]	[illegible]	[illegible]
Conservable Bed Days to Expected	[illegible]	[illegible]	[illegible]	[illegible]
Equivalent Beds at 85% Occupancy	[illegible]	[illegible]	[illegible]	[illegible]
Percent Conservable Days to Expected	[illegible]	[illegible]	[illegible]	[illegible]
Conservable Bed Days to Benchmark	[illegible]	[illegible]	[illegible]	[illegible]
Equivalent Beds at 85% Occupancy	[illegible]	[illegible]	[illegible]	[illegible]
Percent Conservable Days to Benchmark	[illegible]	[illegible]	[illegible]	[illegible]

¹Day surgery cases [illegible]

[illegible]

- [illegible]

[illegible]

- [illegible]
- [illegible]
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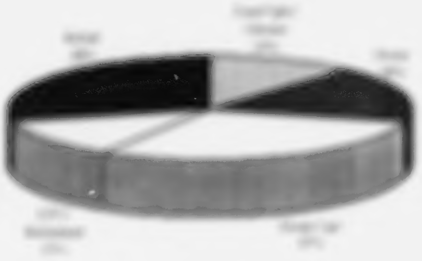
Exhibit 62 - Analysis of Sample Total Patient Care Days – Trauma

Exhibit 63: Total Potential Avoidable Days by Alternate Level of Care for Sample – Trauma



RECENT INITIATIVES

- In October 2001, HRSRH submitted a discussion document, "Northeastern Ontario Regional Trauma Service: A Blueprint for Success" to the MoHLTC.
- Sudbury trauma specialists are compensated through an APP for on-call availability 24 hours/day, 7 days a week.
- Proposal sent to MoHLTC for 22 OR blocks/year to accommodate cancelled surgical patients.
- Attempts to reorganize OR schedules are made if surgeons are involved with trauma cases.
- Implemented "pick lists" to help identify co-morbid conditions to assist in coding.

RECOMMENDATIONS

145 HRSRH should continue to build on the principles discussed in "Northeastern Ontario Regional Trauma Service: A Blueprint for Success" and should strive to offer full trauma services to Northeastern Ontario.

146 Designate 5 trauma beds to improve current resource utilization with the goal of accepting all patients for Northeastern Ontario.

147 Develop acceptance criteria for trauma and educate other hospitals with respect to developed criteria.

148 Develop a guaranteed repatriation program.

UROLOGY

DEPARTMENTAL OVERVIEW

- There are 15 dedicated urology beds located on the 4th floor of the Memorial site. The 35-bed unit also provides services to Vascular and Thoracic patients. Staff for the urology service is considered a separate entity and are only mixed with the other services during service slow down periods or when the number of beds is insufficient for a particular service. The 4th floor also admits off-service patients from the emergency department to prevent back up of patients in the system.
- Staffing:
    - All RN staff, 68% Full Time/32% Part Time
    - 2 urologists, with 1 not taking referrals
- There are minimal sick time and overtime issues in urology.

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):
    - 3,155 (7.2%) cases and 5,148 (3.9%) days
- Trends:
    - Generally increasing volumes. ALOS decreased from 1.6 in 1997/98 to 1.3 in 1999/00, then rebounded to 1.6 in 2000/01.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
    - 4.1 (29%) at ELOS, 7.1 (40%) at benchmark

Exhibit 64: Urology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	2,656	2,701	3,534	3,193
*Average LOS	1.6	1.4	1.3	1.6
Expected LOS	1.1	1.1	1.1	1.2
Benchmark LOS	0.8	0.8	0.8	0.9
Total Days	4,152	3,829	4,579	5,148
Expected Days	2,973	2,862	3,895	3,881
Benchmark Days	2,138	2,108	2,924	2,952
Conservable Bed Days to Expected	1,179	967	683	1,267
Equivalent Beds at 85% Occupancy	3.8	3.1	2.2	4.1
Percent Conservable Days to Expected	28%	25%	15%	25%
Conservable Bed Days to Benchmark	2,014	1,721	1,655	2,196
Equivalent Beds at 85% Occupancy	6.5	5.5	5.3	7.1
Percent Conservable Days to Benchmark	49%	45%	36%	43%

*Day surgery cases counted as 0.25 days per case

ISSUES IDENTIFIED FROM INTERVIEWS

Cost

- Laparoscopic surgery is very expensive and funding has to be found in the current budget.
- In July, day surgeries are expected to increase due to the addition of a third urologist with laparoscopic experience.

Length of Stay

- For several weeks during the review period, there were no urology patients in urology beds.
- There is a lack of bed control resulting in some patients being kept in hospital for the sole purpose of holding a bed for the next case.
- Since January 2002, the CCAC no longer accepts patients requiring dressing changes, catheter care, ostomy care, etc.
- CCAC staff are not permitted to document in the patient chart, which limits communication of patients' placement status.
- Over the last four years, there has been an unstable number of urologists resulting in fluctuating case volumes and patients going elsewhere.
    - 1998 – 3 urologists

  - 1999 – 2 urologists with 1 doing majority of work
  - 2000 – 3 urologists – good service for 1 year
  - 2001 – 2 urologists with 1 not taking referrals

- Patients are primarily admitted through the emergency department.

RETROSPECTIVE CHART REVIEW FINDINGS FOR UROLOGY

Based on the retrospective assessment of 19 records, this program cluster has an opportunity to achieve a potential reduction of 58.2% in LOS. Key findings include:

- 15.7% of admissions (3 cases) to hospital were identified as potentially avoidable admissions to hospital. These cases contributed to 9 potentially avoidable days (5.1% of the program sample). These were cases that did not meet the InterQual admission ISD-AC criteria.
- A further 93 days, or 53.1%, of continued hospital stay days were found to be potentially medically unnecessary at an acute level of care. This finding was based upon the documentation available in the health record and measured using the InterQual ISD-AC screening discharge criteria tool.
- The Program identified 53 days as "Designated ALC" days (30%) of total days.
- The total potentially avoidable days identified by the review team, including the ALC days identified by HRSRH, was 102 (or 58.2% of reviewed days). (9 days not meeting admission criteria and 93 days meeting discharge criteria from acute care).
- Emergency Room waiting times were calculated from the time of admission to hospital to the time of arrival on the designated nursing unit. Overall, the average waiting time in the Emergency Department was 3.1 hours.

Of the 102 potentially avoidable days identified by the review team, the alternate levels of care required were:

- 5.9% to Home (6 days);
- 23.5% to Home Care (24 days);
- 56.9% to Long Term Care (58 days); and
- 13.7% to Outpatient/Ambulatory (14 days).

Exhibit 65: Analysis of Sample Total Patient Care Days – Urology

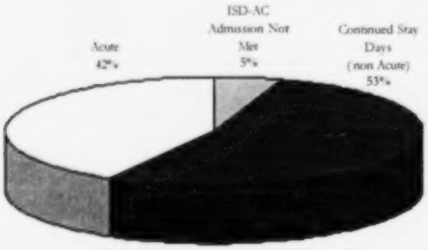
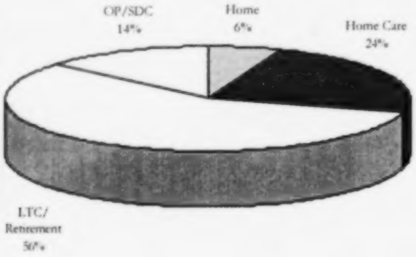


Exhibit 66: Total Potential Avoidable Days by Alternate Level of Care for Sample – Urology



RECOMMENDATIONS

149.Reduce urology beds by 5 beds. Associated savings based on $230 per day nursing unit cost will be $356,788.

150.After bed reductions, re-evaluate role of Clinical Leaders and staffing levels.

151.Close urology beds on weekends on Friday at 7 p.m.; reopen at 7 a.m. on Monday.

152.Implement strict early morning discharge time with communication to family in advance.

153.Implement Expected Date of Discharge protocol.

154.Schedule complex cases requiring longer LOS early in the week to ensure discharge by Friday.

155.Aggressively implement Clinical Pathways based on current best practices.

PATIENT CARE DEPARTMENT FINDINGS

CARDIAC CATHETERIZATION LABORATORY

DEPARTMENTAL OVERVIEW

- HRSRH is the Northeastern Ontario cardiovascular referral centre. The cardiac catheterization laboratory is managed within the Cardio-diagnostic program.
- The Department operated a cardiac catheterization laboratory and a pacemaker clinic located at the Memorial site as well as a pacemaker clinic in Timmins.
- The single cardiac catheterization laboratory provides the following services: cardiac angiograms, IABP, right and left heart catheterization, pericardiocentesis, temporary pacemakers and pre and post amigo care.
- In 2000/01, HRSRH performed 2,529 cardiac angiograms and 720 Percutaneous Transluminal Coronary Angioplasties (PTCA).
- There are eight cardiologists on staff.
- Good communication between the ICUs, medical floors, emergency department and the cardio diagnostic department.
- Innovative staffing patterns have been utilized (e.g. Phasing out pressure technician positions).

BENCHMARKING

- Expenses have been increasing at an average rate of 10% a year for the last five years. FTEs have increased from 13.6 in 1997/98 to 20.1 in 2001/02. Note that these numbers include the Radiology Angiography Suites.
- The reported workload measurement data for Cardiac Catheterization at HRSRH are unreliable. Workload is not captured for many of the tasks performed.
- The cost per workload units for HRSRH (based on the available data) is $4.08, which is between the 25th percentile and the median.

Exhibit 67: Cardiac Catheterization Laboratory Trends in Expenses and Activity (1997/93 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 3,181,870	$ 3,426,982	$ 3,941,440	$ 4,501,475	$ 4,873,547
% Change		7.7%	15.0%	14.2%	8.3%
Compensation Expenses	$ 885,382	$ 1,093,949	$ 1,083,803	$ 1,359,554	$ 1,458,363
% Change		23.6%	-0.9%	25.4%	7.3%
FTEs	13.6	15.3	15.7	18.6	20.1
% Change		12.7%	2.4%	18.1%	8.4%
Compensation per FTE	$ 65,008	$ 71,283	$ 68,978	$ 73,250	$ 72,484
% Change		9.7%	-3.2%	6.2%	-1.0%
Workload Units	531,391	675,532	1,182,638	1,039,633	926,297
% Change		27.1%	75.1%	-12.1%	-10.9%
Workload Units / FTE	39,017	44,018	75,268	56,013	46,039
Cost per Workload	$ 5.99	$ 5.07	$ 3.33	$ 4.33	$ 5.26

** 2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Workload Unit

HRSRH	$ 4.08
25th Percentile	$ 3.78
Median	$ 4.94
75th Percentile	$ 8.21

Potential Savings at 25th Percentile	$ 574,677
Potential Savings % of Total Expenses:	12.8%

ISSUES

- The department is a high volume service with staffing pressure issues. Other centres of comparable size with one Cardiac Catheterization laboratory perform from 654 to 1,982 angiographies per year compared to 2,529 at HRSRH.
- The Cardiac Catheterization Laboratory has taken over the function of processing cardiac patients through the pre-admission clinic. The Department developed an area to prepare the same day admitted angiograms and PTCAs. This was implemented with no increase to staffing or budget.
- Staff retention has not been an issue.
- Case assignment process may be improved to give appropriate priority to inpatients and higher acuity outpatients.

RECENT INITIATIVES

- The Department is proposing the addition of a second cardiac catheterization laboratory to handle the increased volume and providing Electrophysiological Studies (EPS) for patients in Northeastern Ontario. The second lab will also allow for all permanent pacemaker implants to be done in the lab and free up OR time.

RECOMMENDATIONS

- No opportunities were identified for the Cardiac Catheterization Laboratory at this time.

CLINICAL LABORATORY

DEPARTMENTAL OVERVIEW

- Department provides clinical laboratory services to HRSRH patients on three sites.
- The laboratory provides services in: Phlebotomy, Chemistry, Hematology, Blood Bank, Microbiology, Flow Cytometry and Pathology. A separate department in the hospital provides Genetics services.
- Laboratory technologists also provide ECG services.
- The total department expenditures in 2000/01 were $14.6 million. The department employed 135 non-medical FTEs (122 excluding Genetics) and 10 Pathologists in 2000/01.
- Of the total 10.5 million workload units performed in 2000/01, 44% were inpatient, 45% outpatient, and 10% referred-in.
- Considerable consolidation of disciplines has been done (especially for expensive lab tests) although some level of lab services is still provided out of all three sites (specifically, Blood Bank, Chemistry, and Hematology).

BENCHMARKING ANALYSIS

Total Departmental Analysis

- Total Clinical Laboratory expenses have been increasing steadily over the last five years. This increase is driven by an increase in FTEs (from 122 in 1997/98 to 135 in 2000/01). Medical remuneration increased by over 70% over the same period.
- Clinical Laboratory activity as measured by total workload units also seems to be rising, although data quality issues prevent a true five-year trend analysis.
- The HRSRH total Laboratory cost per workload unit is $1.08, well above the cohort 75th percentile. The cohort median is $0.85 and the cohort 25th percentile is $0.79. Based on these numbers, the total potential savings in the Laboratory at HRSRH benchmarked at the 25th percentile are $2.78 million or 24.5% of expenses.
- When excluding Genetics, however, the cost per workload drops to $0.94, which is just below the 75th percentile. Excluding Genetics, the potential savings at the 25th percentile are $1.51 million or under 16% of expenses.

Exhibit 68: Clinical Laboratory (Excluding Genetics) Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 11,300,693	$ 11,906,989	$ 13,329,993	$ 14,663,259	$ 14,950,300
% Change		5.4%	12.0%	10.0%	2.0%
Compensation Expenses	$ 6,100,079	$ 6,106,305	$ 7,253,912	$ 8,035,689	$ 8,062,893
% Change		0.1%	18.8%	10.8%	0.3%
FTEs (Non Medical)	122.7	121.5	127.2	134.9	131.8
% Change		-1.0%	4.7%	6.1%	-2.3%
Compensation per FTE	$ 50,127	$ 50,660	$ 57,028	$ 59,580	$ 61,310
% Change		0.9%	13.6%	4.5%	2.9%
Medical Remuneration	$ 1,725,329	$ 1,886,891	$ 2,452,318	$ 2,761,318	$ 2,961,103
% Change		9.4%	30.0%	12.6%	7.2%
Workload Units	11,702,867	10,096,801	9,250,105	10,460,839	10,131,779
% Change		-13.7%	-8.4%	13.0%	-3.1%

** 2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Workload Unit (excludes certain expenses and net of recoveries)

HRSRH (Total Lab)	$	1.08
HRSRH (Excluding Genetics)	$	0.96
25th Percentile	$	0.70
Median	$	0.82
75th Percentile	$	0.99

Potential Savings at 25th Percentile	$	2,780,357
Potential Savings % of Total Expenses		26.2%
Potential Savings at 25th Percentile (excl. Genetics)	$	1,349,309
Potential Savings % of Total Expenses (excl. Genetics)		10.7%

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Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expense / Workload Unit
North Bay Gen	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]
St Joseph's - Ham	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]
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Royal Victoria	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]
HRSRH	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]
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	[illegible] 50th Percentile		[illegible]

ISSUES

- Key changes: Three distinct software, changing services, amalgamation of histology, moving systems onto 3 computer systems
- Labour issues
  - Aging workforce due to [illegible] years of no hiring. [illegible]
  - [illegible]
  - [illegible]
  - [illegible] Chemistry, Haematology, and Microbiology

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  - Recruitment – new postings, mentorship. Relying on community colleges in Sudbury to train people, as Toronto training programmes not meeting needs of province.

- Consolidation:

  - The consolidation of services from the three sites to one site with core labs at the other two sites is incomplete.
  - Space constraints limit consolidation of services. Further consolidation possible at SJH site, only if more space is made available.
  - 2 FTEs for specimen receipt and sorting on each site.
  - Blood bank still on 3 sites.
  - Haematology and Blood Bank consolidation will allow for cross-training related efficiencies.
  - Blood Bank – Laurentian – although least acute site but high demand due to Oncology and Renal Dialysis; Memorial also has high demand due to cardiovascular surgery.

- Equipment and technology:

  - Cost efficiencies, especially in Clinical Chemistry, are hampered by old equipment.
  - Chemistry analyzers at all 3 sites demanded by clinical programs. Old analyzers (age from 10-15 years) require more dispatching. Immunochemistry, special chemistry and expensive tests are consolidated at SJHC.
  - Haematology – 3 vendors of equipment, standardized and consolidated; coagulation challenges, aging equipment, only at SJHC & Memorial. Moved to single vendor for Haematology equipment.

- Functional program for new site does not provide for growth. There is limited space for equipment (e.g. planning for freezers in hallway) and no space for medical microbiologists. Lab facilities are part of Phase 2 of the construction project.

- Need to provide molecular biology testing, virology, parasitology, especially with expected teaching role.

- Receipt services have undergone some decentralization – many specimens are handled twice – some additional efficiencies can be achieved in this process.

- Pathologists are contracted by the hospital on a fee for service basis – 10 pathologists on staff, average remuneration $275,000.

- Province moving from licensing to accreditation, the system is currently being beta-tested and could be rolled out as early as April 2003. More stringent performance criteria will be applied putting added pressure on Lab departments.

RECENT INITIATIVES

- Non-proficiency analysis indicates modernizing of chemical analyzer platforms is required. Developing business case with financial impact analysis for reagent agreements to upgrade chemical analyzers while averting capital expenditures ($700,000 for chemical portion with savings of $300,000). Other (non Chemistry) equipment in reasonable shape.

- Submitted proposals to purchase a sample sorter, which will lead to staff utilization efficiencies and FTE reductions.

RECOMMENDATIONS

136. The provincial laboratory services review project currently underway is expected to develop recommendations that will outline the nature of laboratory services in the province. HRSRH would be expected to restructure its laboratory services in accordance with these recommendations. As such, specific recommendations on opportunities for savings in laboratory will not be made in this report. Instead, the following guidelines are presented for consideration:

- HRSRH should strive to achieve the cohort median cost per workload unit (excluding Genetics) of $0.85, by:

  - Optimizing skill mix (technologists and Tech 4s)
  - Increased productivity from cross training
  - Consolidation of Blood Bank
  - Reduction of Charge Technologist role

- HRSRH should review the current pathologist fee-for-service remuneration system with the objective of identifying more cost effective compensation models.

- HRSRH should complete the business plan for implementation of new chemistry analyzer platform. The plan should include the following:

  - aggressive negotiation of acquisition price
  - clear delineation of operating savings (through increased productivity and reduced reagent costs)
  - implementation should lead to 25th percentile performance for Chemistry.

- Post single site consolidation, HRSRH should strive to achieve the 25th percentile performance level across Lab Services.

DIAGNOSTIC IMAGING

DEPARTMENTAL OVERVIEW

- Diagnostic Imaging is located across all 3 sites providing the following services:

  - Laurentian: MRI, CT, Mammography, Ultrasound, Radiology, File Room, Transcription, Reception
  - SJHC: CT scan, Ultrasound, Multipurpose (scanning room, recovery & prep area, patient waiting area), Radiology, File Room, Transcription, Reception, Nuclear Medicine
  - Memorial: Angiography, Ultrasound, Radiology, Reception, File Room, Transcription.

- The primary objective of the department is to provide quality Diagnostic, Therapeutic and Consultative services to patients and physicians in Radiology, Nuclear Medicine (excluding Nuclear Cardiology), Mammography, Ultrasound (excluding Echocardiography), Angiography (excluding cardiac catheterization), interventional procedures, CT and MRI.

- DI has an operating budget of $11,524,374 and a staff of 105 FTEs.

- The department generates 161,000 exams and 6,309,744 workload units/year (2001/2002 data).

- One management structure is in place for all three sites.

BENCHMARKING ANALYSIS

- Total diagnostic imaging expenses have increased by 25% over the last five years.

- The HRSRH total Diagnostic Imaging cost per workload is $2.28 and is at the 75th percentile. The cohort median is $1.78 and the cohort 25th percentile is $1.61. Based on these numbers, the potential savings in Diagnostic imaging at HRSRH benchmarked at the median are $2.94 million or 21.8% of expenses.

- The main area of savings would occur in X-Ray. HRSRH X-Ray cost per workload unit is $1.94, well above the cohort 75th percentile. The cohort median is $1.37 and the cohort 25th percentile is $1.15. Based on these numbers, potential savings in X-Ray benchmarked at the median is $1.5 million or 29.4% of expenses.

- Other areas within Diagnostic Imaging where there are significant savings include Computed Tomography ($347,467 at the median) and MRI ($251,125 at the median).

Exhibit 70: Diagnostic Imaging (Combined) Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 11,009,618	$ 11,489,533	$ 13,184,626	$ 13,717,266	$ 13,868,200
% Change		4.4%	14.8%	4.0%	1.1%
Compensation Expenses	$ 4,899,808	$ 5,199,114	$ 5,257,954	$ 5,872,193	$ 5,689,533
% Change		6.1%	1.1%	11.7%	-3.1%
FTEs (Non Medical)	87.4	89.7	95.0	101.5	94.9
% Change		2.6%	6.0%	6.8%	-6.4%
Compensation per FTE	$ 56,082	$ 57,993	$ 55,349	$ 57,875	$ 59,934
% Change		3.4%	-4.6%	4.6%	3.6%
Workload Units	7,722,882	8,346,143	4,911,527	5,898,375	6,454,995
% Change		8.1%	-41.2%	20.1%	9.4%
Workload Units / FTE	88,395	93,097	51,703	58,133	67,998
Cost per Workload	$ 1.43	$ 1.38	$ 2.68	$ 2.33	$ 2.15

** 2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Workload Unit (excludes certain expenses and net of recoveries)

HRSRH	$	2.28
25th Percentile	$	1.61
Median	$	1.78
75th Percentile	$	2.28

Potential Savings at 25th Percentile	$	3,955,509
Potential Savings % of Total Expenses		29.4%

Potential Savings at 50th Percentile	$	2,936,742
Potential Savings % of Total Expenses		21.8%

ISSUES:

- Operating three sites has had tremendous impact on this department. There has been little opportunity to consolidate services within DI due to the diverse and complex clinical requirements associated with the services at each site. For example, the following clinical program placements has significantly impacted DI and has not allowed the department to achieve significant operating efficiencies
    - ED consolidation at the SJHC site
    - ACU requirements at the Memorial site
    - OR move to Memorial and SJHC sites
    - Urology transfer to the Memorial site
    - NEORCC expansion at the Laurentian site
- Have had two Meditech upgrades since merger.
- Took 18 months to convert 2 years of data at all 3 sites – impact of moving to single health record number.

- Sharing radiology database through NEON partnership with other organizations, which causes delays in process. HRSRH is not able to make timely changes to their own RIS.
- Significant issues related to the reporting of workload in past. This is now improving, but outstanding issues remain.
- Currently require 45 clerical staff to deal with multiple film storage locations.
- Statistical data from the three legacy systems was entered differently for all three and remains un-validated until January 1 2001.
- Issues related to capturing workload data associated with cardiac catheterization. All procedures are included in DI, however staff and resources are in a separate department. This has now been addressed.
- As well, all clerical staff are reported under general X-ray in the MIS submissions. However, in reality clerical staff function in all the modalities. Thus, the benchmarking data should be viewed with some caution.
- Procedure dictionaries have recently been rebuilt.
- Pre-merger agreement with OPSEU – staff trained at 2 sites, scheduling has been difficult due to the need to cover three sites.
- Restructuring space limitations have resulted in DI losing access to Surgical/Medical daycare/recovery beds for patients receiving interventional procedures. As a result, DI has been required to increase RN/RPN coverage in order to provide post-intervention care to these patients.
- Cost savings initiatives such as Voice Recognition (currently funded operationally) have been put on hold indefinitely.
- DI is not compensated by NEORCC for the increasing number of PICC lines.
- Physician recruitment initiatives have substantially increased costs and demand within DI (for example the addition of a vascular surgeon).
- Nuclear medicine issues include the fact that equipment is generally outdated. HRSRH has only one dual headed camera. As well, there are significant recruitment issues associated with this modality. The local community colleges do not offer a nuclear medicine program.

RECENT INITIATIVES

- One management structure in place. Common policies and procedures are in place across all three sites.
- 80% of staff can work at two sites, and 100% of the nursing staff rotates to all three sites.
- Worked with Materials Management to use multi-site volume to negotiate single sources and excellent contracts for film contrast and barium products.
- PACS Business plan developed.
- Maximizing revenue-generating opportunities associated with MRI.

RECOMMENDATIONS

Given the significant issues related to the quality of the data, and the need for providing complex services on three sites, there are a limited number of opportunities available for this department at this time.

157.Proceed with the implementation of Voice Recognition. Will result in $80,000 savings by Year 2 of a Recovery Plan. Upon a single site, will result in an additional 1.5 FTE saving.

158.Continue with efforts with respect to inventory improvement. Will result in savings of $100,000 for Year 1.

159.Improve linkages with the Finance department to ensure that referred in revenues accurately reflect volumes. Will result in $60,000 additional revenues in Year 1, and $80,000 in Year 2. This should be sustainable throughout the five-year plan, and should be increased to $100,000 in Years 4 and 5.

160.Reallocate clerical staff and assign to specific modalities.

161.Review current arrangement with community colleges. The Clinical Instructors who primarily support college students are funded 50% by HRSRH.

162.Upon completion of the single site, there will be significant opportunities to reduce staff (both clerical and technical). As well, the adoption of PACS technology, while requiring a large capital investment will also result in further staff savings. Years 4 and 5 of the Recovery Plan should include a target of $1.0 million in savings assuming that one site is operational.

EMERGENCY SERVICES

DEPARTMENTAL OVERVIEW

- HRSRH provides primary, secondary and tertiary health care services to a large catchment area. This catchment includes the greater city of Sudbury and the area known as Network 11 and also serves the Northeastern Ontario communities for the secondary and tertiary health care needs, if these services are not available in their community.
- Emergency Services are currently provided at the SJHC site only and are the sole emergency services provider in the Sudbury Region.
- The Emergency Department and the Critical Care comprise one of the five clinical programs in the hospital.

BENCHMARKING ANALYSIS

- Emergency Room expenses have fluctuated over the last five years with some stability over 1999/2000 and 2000/01 followed by a projected 14% increase in 2001/02.
- Non Medical FTEs are also projected to increase by 10 from a steady rate of 63 to 65 over four years since 1997/98.
- Total visits, on the other hand, have decreased from over 80,000 in 1997/98 to just over 60,000 in 2000/01 and 2001/02.
- The cost per visit has increased every year and has exceeded $100 per visit in 2001/02.
- In 2000/01, the HRSRH ER cost per visit was $92.77, putting it between the median and the cohort 75th percentile. A 25th percentile benchmark of $72.87 for HRSRH in 2000/01 would have required a cost reduction of $939,105 or 28.4%.
- Nursing Incentives (2000) and MoHLTC (Spring 2001) allocated money to be used towards front line staffing and quality nurse positions within the Emergency Department.

Exhibit 71: Emergency Services Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 5,420,630	$ 5,086,484	$ 5,749,924	$ 5,605,485	$ 6,392,959
% Change			13.0%	-2.5%	14.0%
Compensation Expenses	$ 4,354,112	$ 4,192,715	$ 4,186,919	$ 4,385,587	$ 5,084,336
% Change		-3.7%	-0.1%	4.7%	15.9%
FTEs	63.4	61.1	65.5	65.9	75.6
% Change		-3.6%	7.2%	0.6%	14.7%
Compensation per FTE	$ 68,714	$ 68,638	$ 63,951	$ 66,591	$ 67,253
% Change		-0.1%	-6.8%	4.1%	1.0%
Total Visits	80,920	75,196	63,571	60,424	60,275
% Change		-7.1%	-15.5%	-5.0%	-0.2%
Visits per FTE	1,277	1,231	971	917	798
Dept Cost per Visit	$ 66.99	$ 67.64	$ 90.45	$ 92.77	$ 106.06

* *2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Weighted Case (excludes certain expenses)

HRSRH	$	88.41
25th Percentile	$	72.87
Median	$	88.41
75th Percentile	$	94.51

Potential Savings at 25th Percentile	$	959,105
Potential Savings % of Total Expenses		28.4%

ISSUES

- The Emergency Department of HRSRH, in its current location, is a department that is poorly designed and is inadequate to handle the current annual visit volume of 60,000 patients. The department is old, restrictive and has several deficiencies.
- Difficult and lengthy transport process for patients transferred from one site to another where a bed is available or where the care is more appropriate.
- The average LOS in emergency for a general in-patient bed at HRSRH is up to 8.7 hours and up to 15.5 hours for some patients.
- Availability of specialty services to support Emergency patients is variable. In particular, the unavailability of psychiatrists after 5pm is very limiting. It is not infrequent for inpatients to wait for a mental health bed for days.
- There is a Fast Track area where non-urgent patients are looked after during certain periods of the day.
- The footprint is inadequate for the current visit volumes. To cope with this limitation, the department is forced to designate six hallway stretchers as treatment areas.

RECENT INITIATIVES

- A crisis team comprised only of nurses has been assigned to SJHC site.
- Crisis Nurses assigned directly to work in the Emergency Department on a 24 hour / 7 day a week basis began April 2002.
- A new chief of staff has undertaken new initiatives e.g. limiting the use of clinical diagnostic services.
- The hospital's patient flow team is currently under review.
- The Department has an excellent CME program, primarily focused on physicians but is also available to nurses.
- The Department's Orientation Program for new nurses is excellent.
- An APP is now in place.

RECOMMENDATIONS

163. Patient flow and the patient holding/waiting areas related to the triage processes should be re-examined.

164. It is recommended that on-going meetings, at a senior level, should continue to be held between HRSRH and the Ambulance Service and the District Health Council (DHC) to discuss improved cooperation and develop a plan to address non-urgent and intra-site transfers in a timely fashion.

165. Implement a Bed Management process to support patient focused care. This process places the right patient in the right bed, minimizes internal transfers and reduces waiting time for an in-patient bed. Many high occupancy hospitals experience that utilizing a first available bed policy does not work efficiently.

166. The Utilization Committee should implement processes to review appropriateness of admissions, monitor continued stay and analyze practice variation as well as monitor statistics from all programs including Emergency Services.

167. It is recommended that the Hospital continue to work closely with CCAC to articulate a strategy that will optimize the use of available CCAC resources to accelerate hospital discharges where appropriate and avoid admissions when appropriate.

168. A clear response time policy for consultants (and anyone else providing on-call service to the hospital) should be enforced. The response time policy must clearly establish standards for responding by telephone and time standards for appearing in the Emergency Department. The response time policy must have clear expectations and consequences for violation must be delineated and enforced.

The following recommendations were made as a separate CHM study of the Emergency Room:

EXTERNAL ENVIRONMENT

- It is recommended that the Hospital, from the perspective of the provision of Emergency Services delivery, should continue to pursue and plan for the necessity and cost savings associated with the consolidation of services to a single site.
- It is recommended that on-going meetings, at a senior level, should continue to be held between HRSRH and the Ambulance Service and the District Health Council (DHC) to discuss improved cooperation and develop a plan to address non-urgent and inter-site transfer in a timely fashion.
- It is recommended that the Hospital and The Community Mental Health Group and DHC continue to work together to address how to meet the mental health needs and the frequent situations when the demand on in-patient psychiatric bed exceeds the available operating beds.
- It is recommended that the Hospital continue to work closely with CCAC to articulate a strategy that will optimize the use of available CCAC resources to accelerate hospital discharges where appropriate and avoid admissions when appropriate.

INTERNAL ENVIRONMENT

Admitted Patients in the Emergency Department

- The Utilization Committee should implement processes to review appropriateness of admissions, monitor continued stay and analyze practice variation as well as monitor statistics from all programs including Emergency Services.
- A Bed Management process to support patient focused care. This process places the right patient in the right bed, minimizes internal transfers and reduces waiting time for an in-patient bed. Many high occupancy hospitals experience that utilizing a first available bed policy does not work efficiently. – Examples of graduated response process.
- Discharge planning should be a standing order for patients at the time of admission. An estimated date of discharge (EDD) should be provided for every admitted patient with the understanding that in some cases the discharge may be accelerated or delayed.
- Criteria, developed with and involving CCAC, should be created and applied as early as possible for emergency patients and all admitted patients where appropriate.
- The Discharge Time Policy should be communicated to patients and relatives at admission and to be enforced when appropriate.
- Better collaboration between sites should be established and improved inter-site transfers should be used where appropriate, e.g. where a patient is waiting admission in Emergency Department at a site with no bed available, the patient is transferred to the site with available bed.
- A Discharge Lounge is worth re-investigating and should include a cost benefit analysis. This concept has proved to be helpful for many hospitals in expediting patient discharge.
- The transfer of admitted patients to in-patient units from the Emergency Department must be a high priority. In-patient units should accept all patient transfers from the Emergency Department without delay.

- Compliance with the use of the developed clinical pathways, to be implemented April 2002, should be monitored and variances are to be communicated to individual physicians, the management of individual programs and to the Utilization Committee.

CONSULTANT SUPPORT

- A clear response time policy for consultants (and anyone else providing on-call service to the hospital) should be enforced. The response time policy must clearly establish clear standards for responding by telephone and time standards for appearing in the Emergency Department. The response time policy must have clear expectations and consequences for violation must be delineated and enforced.
- All staff and physicians who are on call to the Emergency Department must be accessible only by numeric pagers, and not through a third party e.g. home, office, etc. This method should be consistent across the organization.
- Response time data must be collected and monitored. Data from this process should be communicated to the Department Chiefs and the Chief of Staff.
- Consultants, when providing on-call support to Emergency Services, should avoid, as much as possible, to be engaging with activities (elective surgery, running an office, Cathe Lab etc.) that may delay availability to the Emergency Department.
- Inappropriate referrals, by patterns or by individual physicians, should be utilized as educational opportunities and should be followed up by the Chief of Emergency Department and the Chief of the appropriate clinical service.
- It is suggested that a policy be developed to address clear expectations regarding direct referrals. Such a policy will avoid inconsistencies, which are dependent on the service or the consultant involved.

OTHER SUPPORT SERVICES

- It is recommended that DI track and / or audit turn around time for radiology tests on regular basis.
- It is also recommended that DI assist the Emergency Department to track the percentage of false negative findings by both the department and by individual practitioners.
- It is recommended that the lab turnaround time continue to be monitored and actions be initiated to minimize the impact of closing the satellite lab on Emergency Services.
- If a Stat Lab in the Emergency Department is being considered in the future, appropriate machines must be deployed i.e. machines capable to work on whole blood.
- Ordering patterns should be available to the Chief of Emergency Medicine and should be monitored.
- The Emergency Department sees a large number of psychiatric patients. It is recommended that a healthcare provider with psychiatric and crisis intervention expertise i.e. Nurse Practitioner, Clinical Nurse Specialist be considered and be available to see patients in the department. It is noted that a 24 hour crisis intervention worker will be available to the Emergency Department starting April 1, 2002.

- In the industry, the role of clinical pharmacists in the Emergency Department is expanding to include patient counselling on medication use, staff education and advice. This role should be considered for Sudbury.
- The department would benefit from having an orthopaedic technologist available at peak hours after the Fracture Clinic closes, i.e. 1600h – 2400h. The department reports it is currently training department staff to fulfill this role.

EMERGENCY DEPARTMENT PHYSICIAN STAFFING

- It is recommended that an Emergency Department Backup On-Call system be in place with specific criteria. Such criteria can address issues such as when the physician is to be called in and by whom.
- The role of Family Practice Physicians in the Emergency Department should be considered and be encouraged.
- The Emergency Department and Family Practice physicians are dependent on each other. Thus the relationship between the two should be the focus of continuous improvement.
- It is recommended that a physician productivity measurement system be developed. This system will assist in monitoring performance variation so as to intervene if it is a measurable stage. It can also be utilized to reward high performance. (The Chief of Emergency Medicine indicates work on such system is well underway and is to be implemented April 2003.)

EMERGENCY DEPARTMENT NURSE STAFFING

- The Registered Nurses providing emergency care should be expected to meet the standard mentioned above (BCLS, ACLS, TNCC, PALS or ENPC, and CEN) within 18 – 24 months.
- It is recommended to conduct frequent audits to measure the response time to meeting triage guidelines to assess patients based on triage levels.
- It is recommended that blood procurement and ECG functions could be decentralized to the Emergency Department Registered Nurses. These functions can be performed while the nurse performs patient assessment. Phlebotomy services from the lab can be used as backup when required.

DEPARTMENTAL QUALITY ASSURANCE ACTIVITIES

- Random audits should be conducted to measure different stages of patient stay in the Emergency Department i.e. arrival to triage, triage to treatment area, treatment area to physician assessment, etc.
- Specific clinical audits should be developed.
- It is recommended that indicators, such as the ones mentioned above, be developed and are to be monitored against pre-set targets on a monthly basis. The findings of these indicators should be used as an educational tool as well as to measure the department's and individual provider's productivity and performance.
- Each staff member should have a performance appraisal on an annual basis. The performance appraisal should be based on and include, but not necessarily limited to, the following:

- self assessment / peer review
- complaints
- compliments
- incidents
- sick leave
- professional development
- continuing education credit
- departmental involvement

- Patient and staff satisfaction surveys should be conducted regularly in conjunction with [illegible] Once the survey is completed, results should be communicated to the departments and managers [illegible] developed and monitored.

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Exhibit 72: Pharmacy Trends in Expense and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
FTEs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation per FTE	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Workload Units	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Workload Units / FTE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cost per Workload			$ [illegible]	$ [illegible]	$ [illegible]

* [illegible]

Benchmark Cost per Weighted Case (2000/01)

	Pharmacy	Drugs	Total
[illegible]	$ [illegible]	$ [illegible]	$ [illegible]
25th Percentile	$ [illegible]	$ [illegible]	$ [illegible]
Median	$ [illegible]	$ [illegible]	$ [illegible]
75th Percentile	$ [illegible]	$ [illegible]	$ [illegible]

Potential Savings at Cohort Median	$ [illegible]	$ [illegible]	$ [illegible]
Potential Savings % of Total Expenses	[illegible]	[illegible]	[illegible]

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Drug Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]

M121

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Exhibit 73: Pharmacy Department Expenses per Weighted Case (2001/02)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Grand River	$858,672	$771,591	24,320	$31.73
North York Gen	$2,117,245	$1,790,343	37,224	$48.10
Windsor Reg	$3,319,057	$2,994,923	50,943	$58.79
St. Joseph - Ham	$1,968,529	$1,228,546	36,276	$33.87
Lakeridge	$3,044,208	$2,317,493	38,203	$60.66
Royal Victoria	$1,063,409	$886,630	21,320	$41.59
Sault Area Hosps	$1,163,458	$849,360	17,828	$47.64
Rouge Valley	$3,064,643	$2,455,311	36,006	$68.19
Credit Valley	$2,809,093	$2,676,303	25,163	$106.36
Peterborough Cc	$1,683,343	$1,461,324	24,041	$60.78
Trillium	$2,781,333	$2,216,605	41,138	$53.88
Humber River	$2,737,952	$2,287,743	45,372	$50.42
Thunder Bay Reg	$1,746,571	$1,578,028	27,895	$56.57
William Osler	$4,081,410	$3,482,056	52,352	$66.51
North Bay Gen	$894,949	$709,571	14,353	$49.44
HRSRH	$2,997,207	$2,606,823	37,454	$69.59
	Mean			$56.51
	25th Percentile			$47.98
	50th Percentile			$55.23
	75th Percentile			$62.22
	Multi Site 25th Percentile			$49.44
	Multi Site 50th Percentile			$56.57
	Northern/Sole 25th Percentile			$46.13
	Northern/Sole 50th Percentile			$53.00

Exhibit 73: Pharmacy Department Expenses per Weighted Case (2001/02)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Grand River	$858,672	$771,591	24,320	$31.73
North York Gen	$2,117,245	$1,790,343	37,224	$48.10
Windsor Reg	$3,319,037	$2,994,923	50,943	$58.79
St. Joseph - Ham	$1,968,529	$1,228,546	36,276	$33.87
Lakeridge	$3,044,208	$2,317,493	38,203	$60.66
Royal Victoria	$1,063,400	$886,630	21,320	$41.59
Sault Area Hosps	$1,163,458	$849,360	17,828	$47.64
Rouge Valley	$3,064,643	$2,455,311	36,006	$68.19
Credit Valley	$2,809,095	$2,676,503	25,165	$106.36
Peterborough Civ	$1,683,345	$1,461,324	24,041	$60.78
Trillium	$2,781,353	$2,216,605	41,138	$53.88
Humber River	$2,737,952	$2,287,743	45,372	$50.42
Thunder Bay Reg	$1,746,571	$1,578,028	27,895	$56.57
William Osler	$4,081,410	$3,482,056	52,352	$66.51
North Bay Gen	$894,949	$709,571	14,353	$49.44
HRSRH	$2,997,707	$2,606,823	37,458	$69.59
	Mean			$56.51
	25th Percentile			$47.98
	50th Percentile			$55.23
	75th Percentile			$62.22
	Multi Site 25th Percentile			$49.44
	Multi Site 50th Percentile			$56.57
	Northern/Sole 25th Percentile			$46.13
	Northern/Sole 50th Percentile			$53.00

Exhibit 74: Pharmacy Drug Expenses per Weighted Case (2001/02)

Facility Description	*2000/2001 Total Drug Expenses (Net of Recoveries)*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Rouge Valley	$2,687,054	36,006	$74.63
William Osler	$4,238,880	52,352	$80.97
Credit Valley	$2,051,426	25,165	$81.52
Humber River	$3,902,608	45,372	$86.01
Thunder Bay Reg	$2,491,359	27,895	$89.31
Trillium	$3,863,529	41,138	$93.92
Windsor Reg	$4,978,574	50,943	$97.73
Lakeridge	$3,789,726	38,203	$99.20
St. Joseph - Ham	$4,026,563	36,276	$111.00
Sunnybrook & Wom	$7,317,627	59,091	$123.84
St. Michael's	$7,069,605	53,861	$131.26
London HSC	$11,055,727	73,580	$150.25
HRSRH	**$6,294,163**	**37,458**	**$168.03**
		Mean	$106.74
		25th Percentile	$86.01
		Median	$97.73
		75th Percentile	$123.84

ISSUES

- Pre-merger, three separate pharmacies, policies and formularies – currently working on converting to a single formulary.
- Different distribution systems – Memorial and SJHC (traditional where a 7-day supply of medication is provided) and Laurentian (unit dose Friesen system where a 1-day supply of medication is provided). Currently testing Pyxis (automated decentralized dispensary system) on 8th floor Medical unit at Laurentian.
- Shortage of staff pharmacists combined with time consuming roles of checking orders and other dispensary duties means little time for clinical activity (currently only around 10% of total pharmacist time).
- Currently not all technicians are cross-trained across the 3 sites and approximately 75% of the technicians are trained in all dispensary activities.
- Efficient workflow is also impacted by numerous calls for missing doses, medications not transferred, ward stock and narcotic requests.
- Medication turnaround time can be up to 6 hours.
- Still use medication tickets managed by the nurses, which are time-consuming and have potential risks for medication errors. Do not have any pharmacy generated Medication Administration Records (MARs) in place.
- Medication incidents primarily occur at the time of prescribing, transcription, and administration. HRSRH Pharmacy has catalogued medication errors. There is a significant problem with borrowing of medications from other patients.

Exhibit 74: Pharmacy Drug Expenses per Weighted Case (2001/02)

Facility Description	*2000/2001 Total Drug Expenses (Net of Recoveries)*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Rouge Valley	$2,687,054	36,006	$74.63
William Osler	$4,256,000	52,552	$80.97
Credit Valley	$2,051,426	25,165	$81.52
Humber River	$3,902,606	45,372	$86.01
Thunder Bay Reg	$2,491,359	27,695	$89.91
Trillium	$3,663,529	41,150	$89.92
Windsor Reg	$4,976,574	50,943	$97.73
Lakeridge	$3,789,726	38,205	$99.20
St. Joseph's - Ham	$4,026,363	36,276	$111.00
Sunnybrook & Wom	$7,317,627	59,059	$123.94
St. Michael's	$7,065,605	53,861	$131.20
London HSC	$11,055,727	73,580	$150.25
HRSRH	$6,294,163	57,450	$109.55
		Mean	$106.76
		25th Percentile	$86.01
		Median	$97.73
		75th Percentile	$123.94

ISSUES

- Pre-merger, three separate pharmacies, policies and formularies – currently working on converting to a single formulary.
- Different distribution systems – Memorial and SJHC (traditional where a 7-day supply of medication is provided) and Laurentian (unit dose Friesen system where a 1-day supply of medication is provided). Currently testing Pyxis (automated decentralized dispensary system) on 8th floor Medical unit at Laurentian.
- Shortage of staff pharmacists combined with time consuming roles of checking orders and other dispensary duties means little time for clinical activity (currently only around 10% of total pharmacist time).
- Currently not all technicians are cross-trained across the 3 sites and approximately 75% of the technicians are trained in all dispensary activities.
- Efficient workflow is also impacted by numerous calls for missing doses, medications not transferred, ward stock and narcotic requests.
- Medication turnaround time can be up to 6 hours.
- Still use medication tickets managed by the nurses, which are time-consuming and have potential risks for medication errors. Do not have any pharmacy generated Medication Administration Records (MARs) in place.
- Medication incidents primarily occur at the time of prescribing, transcription, and administration. HRSRH Pharmacy has catalogued medication errors. There is a significant problem with borrowing of medications from other patients.

- No accurate measure of workload units. Change in computer systems has limited this effort. Not enough resources to develop a workload measurement system. Department is working on developing and implementing a workload measurement system.
- Loss of management control with off site inventory and centralized purchasing by Materials Management. Circumstances where materials management purchasers switch brand names when ordering without consulting Pharmacy. Department prefers to take back control of drug purchasing.

Automated Medication Dispensing Units (Pyxis)

- Automation through Pyxis implementation could result in a reduction of 7 technician FTEs. However, approximately one technician per 12 Pyxis machines is required to replenish stock. HRSRH would require a total of 33 units, and therefore approximately three technicians. There are space limitations for Pyxis machines on Nursing units at the proposed single site.
- For year one, the estimated total purchase cost for 26 main units and 26 auxiliary units, is $1.8 million, with an annual service maintenance cost of $23,820. In year two, 7 more main units and 7 more auxiliary units can be purchased for $ 498,947 with an annual service maintenance cost of $47,3200. Pharmacy's estimated savings associated with savings is $426,072 with additional savings of $218,780 due to increased clinical activities.

Drug costs

- Have initiated an IV to PO (Oral) step down program, but requires pharmacist resources to evaluate and implement. Once implementation is in place, there are significant savings that can be recovered.
- Antibiotics comprise 30% of the drug costs. The greatest savings from the pharmacy's perspective can be gained from influencing the antibiotic usage in the hospital. The major challenges with achieving this initiative are the lack of pharmacists' clinical time and physician resistance. A pharmacist dedicated to drug usage evaluation would help to achieve these goals.
- The formulary is in progress and several classes of drugs have been reviewed. More time needs to be dedicated to this process in order for it to be distributed to all hospital staff. Costs per unit of medication should be added to the formulary to increase drug cost awareness throughout the hospital.
- Require continued efforts to standardize policies and complete single formulary, reducing non-formulary items and optimize brand standardization.
- Continued efforts at drug standardization and auto substitution will also reduce drug costs. Increase in clinical pharmacist activity could reduce drug costs & improve recruitment and retention efforts.
- Currently no dedicated pharmacist assigned to evaluating drug usage.
- Currently send 7 days of medications for inpatients to nursing units at the Memorial and SJHC sites.

Productivity

- The CIVA (central intravenous admixture program) system:
  - System is varied across all sites: Laurentian – 100% of IVs, Memorial – only antibiotics and SJHC – only for 5 nursing units, primarily small volume IVs.
  - A total of 6 technicians across all sites prepare IVs. The pharmacy currently purchases the majority of IV medications pre-made.
  - There are opportunities to consolidate services with potential cost savings and increasing production capacity to reduce purchasing of pre-mixed IVs. By consolidating CIVA service to the Laurentian site, 1 technician can be eliminated with a potential for a total of 2 technicians eliminated in the future single site. Future directions with the extent of the CIVA service need to be further evaluated.

- Blister packing of medications:
  - Currently, technicians spend approximately 1.5 hours per day in the drug return process. The process involves double-checking the large volume of unused drugs to be returned to the original manufacturer's bottle and crediting.
  - Blister packing of medications can expedite the dispensing and returns process. This would also reduce the medication errors at the ward level.
  - Currently, Laurentian has a unit dose system that has the capacity to blister pack the entire hospital's oral medications. An upgrade to the machine will be needed (cost of $5500) that will include 10 auto feed cassettes and purchasing 20 more auto feed cassettes, at a total cost of $2000.

- Dispensing vials:
  - If blister packing is utilized, dispensing vials will have to be eliminated and changed over to zip lock bags. The estimated cost of a vial is approximately $0.06 each and a zip lock bag is $0.01. This has been attempted in the past but there has been significant nursing resistance due to storage concerns. If the pneumatic tube system is to be used at the Laurentian site, zip lock bags will also allow for more medications to be sent to the ward at one time.
  - On SJHC site, there are also space issues for medication storage on the nursing units. 3-4 technicians spend up to 0.5-1 hour per individual per day for delivery of new individual medications to nursing units due to the time needed to sort through vials containing medications on nursing unit.

- Medication Administration Records (MARs):
  - MARs were tried on one of the wards unsuccessfully. Three extra staff members were required to verify the MARs on the ward. Given the medication administration errors and the dated use of medication tickets, it is extremely important that a MAR system be implemented. Current computer system has the capability of generating MARs for the entire hospital.

- Turnaround of medications may be up to 6 hours. Currently, there are 3 systems in place: SJHC uses the volunteer pool, Memorial uses pharmacy technicians and Laurentian uses the pneumatic tube. If the hospital ultimately moves to the Laurentian site, the pneumatic order system will expedite medication turnaround times. For efficient turnaround, it is important that a portering service (not necessarily pharmacy technician staff) is dedicated to pharmacy. The development of a pre-defined medication order entry dictionary for the computer system will also improve medication turnaround. A pre-defined order entry system will increase efficiency of order entry, reduce errors, and expedite the checking and training process. Implementing pre-defined order requires a significant investment in pharmacist and technician time to set up the infrastructure. However, once this system is set up, it will easily allow the addition of new drugs and directions to the dictionary.

- Night shift issues:

  - One technician available from 0000 to 0800.
  - Move of OR & PACU to other sites have resulted in the reduction in volume of orders for the central pharmacy at this site.
  - All orders entered by technicians require verification by the pharmacist the next morning. However, newer and more updated orders for the same patient might be written since the evening. The time spent by the pharmacist to process these backlogged orders is approximately 1 1/2 hours.
  - There is a high incidence of medication issues by technicians either due to new orders or missing doses after the end of pharmacists' shifts. Issues by technicians are not reviewed by a pharmacist or against the patient profile – medications are issued when the ward nurse demands them.

RECENT INITIATIVES

- Auto substitution policies are in place for some classes of drugs resulting in a reduction in total drug costs.
- Development of 5-6 formulary classes resulted in $500,000 in annual savings in drug costs since 2000/01. Expanding the formulary to include more classes of drugs would potentially result in greater savings for HRSRH. The main challenges to achieving this goal are the availability of pharmacists' time and tackling physician resistance.
- Business plan being developed for full implementation of Pyxis system. Benefits may include freeing up of clinical pharmacist time by 15%, improved inventory control, and decreased medication errors.

RECOMMENDATIONS

(69) Discontinue pursuit of Pyxis implementation at this time, due to high cost for machines and maintenance ($1.5 million plus maintenance costs).

(70) HRSRH should achieve the cohort median drug cost per weighted case of $98 within three years. To achieve that level from the current calculated drug cost per weighted case of $148 would entail a $5.6 million total reduction, or 42% of current drug costs. Recognizing the impact of possible errors made by HRSRH in the proper tracking and reporting of drug rebates and recoveries, and to ensure a more efficiency target, we recommend a total savings of $1.4 million in total drug costs (or 30%) over three years. This would be accomplished as follows:

  - Implementing IV to PO (oral) step-down programs, resulting in savings of 15% over 3 years;
  - Reducing antibiotic usage by 15% over 3 years.

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Exhibit 73: Renal Dialysis Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02*
Total Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change				[illegible]	[illegible]
Compensation Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
FTEs (Non Medical)	75.2	[illegible]	[illegible]	[illegible]	78.8
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation per FTE	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Workload Units	Not Reported	[illegible]	[illegible]	[illegible]	[illegible]
% Change			[illegible]	[illegible]	[illegible]
Workload Units / FTE			[illegible]	[illegible]	[illegible]
Cost per Workload		$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]

* 2001/02 is annualized based on first three quarters of data

ISSUES

- Community served by HRSRH is a high user of dialysis services (age mix, obesity, native population, incidence of diabetes, etc.)
- Lack of an Endocrinologist on staff leads to higher utilization.
- Labour issues:
  - Challenges with staffing in system and satellites because of fluctuating demand for each site
  - Recruitment is an issue, especially for the satellite services – have one RN vacancy at Manitoulin Island for over a year
  - Absenteeism and sick time are not significant issues
  - Overtime is an issue, especially for weekend coverage. Many part-timers have been working full time hours.
- In satellites, patient volumes can increase very quickly. The department faces challenges in maintaining a critical mass of patients in satellites.
- Equipment age is a major issue according to the department. Several dialysis machines are not functional. The useful life for amortization is 5 years but 26 of 47 machines are over 7 years old.

RECENT INITIATIVES

- Change in skill mix to include RPNs resulting in savings of $60,000 (for 2 RPNs) – targeting a 7:3 ratio for RN/RPN mix.

RECOMMENDATIONS

190 Continue shift of skill mix towards 7:3 RN/RPN ratio. Target savings within 3 years is $280,000.

102.Pursue efforts to recruit Endocrinologist to address increasing utilization of dialysis services.

103.Investigate implementation of radiology technology to monitor access clots.

RESPIRATORY THERAPY

DEPARTMENTAL OVERVIEW

- The department provides respiratory therapy services to HRSRH patients through two core groups:

    - Diagnostic – Memorial and Laurentian (12 Full Time, 2 Part Time FTEs)
    - Critical Care – operate across 3 sites (16 Full Time, 1.5 Part Time FTEs)
    - Surgical ICU at SJH (ICU and Step-down)
    - Cardiac ICU at Memorial (CCU and Diagnostic Pulmonary Lung Function)

- Staffing

    - Around 30 FTEs
    - Low turnover
    - Average age under 40

- Some therapist protocols are in use – some are physician driven while others are therapist driven.

BENCHMARKING ANALYSIS

- There has been a 19% increase in Respiratory Therapy FTEs over the five years 1997/98 to 2001/02. This is reflected in a 32% increase in compensation expenses over the last five years.

- The HRSRH Respiratory Therapy cost per workload unit is $1.00, which is 33 % higher than the cohort 25th percentile, and 11% higher than the cohort 75th percentile. There is considerable variability in the workload unit values reported for the functional centre over the five years.

Exhibit 76: Respiratory Therapy Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 2,496,890	$ 2,408,314	$ 2,299,004	$ 2,558,528	$ 2,596,987
% Change		-3.5%	-4.5%	11.3%	1.5%
Compensation Expenses	$ 1,485,143	$ 1,650,808	$ 1,602,671	$ 1,766,422	$ 1,966,361
% Change		11.2%	-2.9%	10.2%	11.3%
FTEs	27.5	28.6	28.8	30.1	32.9
% Change		4.2%	0.5%	4.6%	9.4%
Compensation per FTE	$ 54,060	$ 57,641	$ 55,700	$ 58,707	$ 59,714
% Change		6.6%	-3.4%	5.4%	1.7%
Workload Units	2,485,448	3,466,633	2,719,619	2,376,747	1,121,177
% Change		39.5%	-21.5%	-12.6%	-52.8%
Workload Units / FTE	90,471	121,044	94,518	78,991	34,047
Cost per Workload	$ 1.00	$ 0.69	$ 0.85	$ 1.08	$ 2.32

** 2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Workload Unit (excludes certain expenses)

HRSRH	$ 1.00
25th Percentile	$ 0.75
Median	$ 0.81
75th Percentile	$ 0.90

Potential Savings at 25th Percentile	$ 781,910
Potential Savings % of Total Expenses:	30.6%

M121

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Exhibit 77: Total Respiratory Therapy Net Expenses per Workload Unit and Expenses per Weighted Case (2001/02)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Windsor Reg	$3,252,867	$8,061,709	$0.40	$3,014,334	50,943	$59.17
Sault Area Hosps	$1,083,365	$1,760,746	$0.62	$762,400	17,828	$42.76
Credit Valley	$1,303,053	$2,100,536	$0.62	$1,202,014	25,165	$47.77
Lakeridge	$1,863,698	$2,506,928	$0.74	$799,172	38,203	$20.92
St. Joseph - Ham	$2,573,992	$3,443,484	$0.75	$1,541,440	36,276	$42.49
Trillium	$1,939,240	$2,550,906	$0.76	$1,539,804	41,138	$37.43
Grand River	$1,172,125	$1,518,495	$0.77	$588,149	24,320	$24.18
Rouge Valley	$1,556,018	$1,954,739	$0.80	$1,351,598	36,006	$37.54
Royal Victoria	$963,044	$1,191,115	$0.81	$625,015	21,320	$29.32
William Osler	$2,777,453	$3,281,004	$0.85	$2,257,324	52,352	$43.12
Humber River	$2,274,721	$2,625,827	$0.87	$1,836,096	45,372	$40.47
Peterborough Civ	$972,129	$1,121,557	$0.87	$775,365	24,041	$32.25
Thunder Bay Reg	$1,732,547	$1,931,705	$0.90	$1,607,654	27,895	$57.63
HRSRH	**$2,387,490**	**$2,376,747**	**$1.00**	**$1,762,692**	**37,458**	**$47.06**
North Bay Gen	$654,954	$636,805	$1.03	$511,032	14,353	$35.60
North York Gen	$2,207,524	$2,018,891	$1.09	$1,447,240	37,224	$38.88
Kingston Gen	$3,823,477	$2,350,081	$1.63	$3,392,513	37,408	$90.69
	Mean		$0.85			$42.78
	25th Percentile		$0.75			$35.60
	50th Percentile		$0.81			$40.47
	75th Percentile		$0.90			$47.06
	Multi Site 25th Percentile		$0.76			$36.06
	Multi Site 50th Percentile		$0.86			$39.67
	Northern/Sole 25th Percentile		$0.77			$32.25
	Northern/Sole 50th Percentile		$0.87			$42.76

ISSUES

- Respiratory therapists working at the boundaries of their scope:
  - Cardiac Rehab – Cardiac Stress Testing – previously had a nurse, now RT
  - Performing some ECGs, which were supposed to use modified workers (RNs)
  - The department is responsible for its own supplies processing and distribution
- Merger issues:
  - 3 sites, 3 cultures merged, worked to develop a standardized scope of practice across 3 sites
  - Increased average salary
  - Sick time increased due to stress of merger.
- Budget issues:
  - Department budgets staff in hours only while cost centre reports are by expenses
  - Manager uses an access database and Excel spreadsheet for budgeting staffing (to schedule staff to keep expenses below budget on an ongoing basis)
- Workload not collected properly from 2000 to Jan 2002 (was Meditech patient-specific, poor compliance).

Exhibit 77: Total Respiratory Therapy Net Expenses per Workload Unit and Expenses per Weighted Case (2001/02)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Windsor Reg	$3,252,867	$9,061,709	$0.36	$3,014,334	50,941	$59.17
Sault Area Hosps	$1,085,365	$1,760,740	$0.62	$762,600	17,828	$42.76
Credit Valley	$1,303,053	$2,100,536	$0.62	$1,202,014	25,163	$47.77
Lakeridge	$1,863,696	$2,390,920	$0.78	$799,172	38,205	$20.92
St. Joseph - Ham	$2,573,992	$3,445,494	$0.75	$1,541,460	36,276	$42.49
Trillium	$1,939,240	$2,550,906	$0.76	$1,539,864	41,156	$37.41
Grand River	$1,172,125	$1,518,495	$0.77	$588,149	24,320	$24.18
Rouge Valley	$1,536,018	$1,934,739	$0.79	$1,351,399	36,000	$37.54
Royal Victoria	$963,044	$1,191,113	$0.81	$625,013	21,320	$29.32
William Osler	$2,777,455	$3,281,004	$0.85	$2,257,324	52,352	$43.12
Humber River	$2,274,721	$2,625,827	$0.87	$1,830,096	45,572	$40.17
Peterborough Civ	$972,129	$1,121,357	$0.87	$775,365	24,045	$32.25
Thunder Bay Reg	$1,732,547	$1,931,700	$0.90	$1,607,654	27,895	$57.63
HRSRH	**$2,987,490**	**$2,976,747**	**$1.00**	**$1,762,692**	**37,456**	**$47.06**
North Bay Gen	$654,934	$636,904	$1.03	$511,032	14,555	$35.11
North York Gen	$2,207,324	$2,018,493	$1.09	$1,447,240	37,224	$38.88
Kingston Gen	$3,823,477	$2,350,093	$1.63	$3,592,513	37,400	$96.06
	Mean		$0.83			$42.76
	25th Percentile		$0.75			$35.64
	50th Percentile		$0.81			$40.17
	75th Percentile		$0.90			$47.06
	Multi Site 25th Percentile		$0.76			$36.06
	Multi Site 50th Percentile		$0.86			$39.67
	Northern/Sole 25th Percentile		$0.77			$32.25
	Northern/Sole 50th Percentile		$0.87			$42.76

ISSUES

- Respiratory therapists working at the boundaries of their scope:
  - Cardiac Rehab – Cardiac Stress Testing – previously had a nurse, now RT
  - Performing some ECGs, which were supposed to use modified workers (RNs)
  - The department is responsible for its own supplies processing and distribution
- Merger issues:
  - 3 sites, 3 cultures merged, worked to develop a standardized scope of practice across 3 sites
  - Increased average salary
  - Sick time increased due to stress of merger.
- Budget issues:
  - Department budgets staff in hours only while cost centre reports are by expenses
  - Manager uses an access database and Excel spreadsheet for budgeting staffing (to schedule staff to keep expenses below budget on an ongoing basis)
- Workload not collected properly from 2000 to Jan 2002 (was Meditech patient-specific, poor compliance).

- Hospital level clinical protocols need to be revised to enable Respiratory Therapists to appropriately use their clinical protocols, and avoid overlap with nursing roles and responsibilities.
- Have greater responsibility for step-down unit because of lack of physician coverage.
- Have tried to increase revenue, but increased liability/risk if staff Sleep Lab and require immediate coverage in hospital.
- Weekend coverage is necessary for each site since immediate response time is required. On-call does not work well for RT service model.

RECENT INITIATIVES

- Implemented new workload measurement system since Jan 2002, using an access database. The workload units are anticipated to be more reliable. Also collecting other statistics including ventilator days, procedures, workload, and pulmonary function tests.
- Implemented standardized scope of practice for 3 sites with nursing in critical care, and is working well.
- Creation of full-time positions helped to retain part-time staff who were planning to leave (8 positions). Resulted in decreased overtime, less time spent trying to fill shifts and minimized orientation and recruitment costs.

RECOMMENDATIONS

184.Reduce staffing complement by 3 FTEs over three years (Savings=$165,000) through:

- Use of aides or modified workers
- Increased productivity

185.Improve collection of workload and statistics to evaluate improvements in productivity and outcomes.

186.Explore additional revenue generation opportunities while maintaining appropriate staffing levels for required services ($50,000).

- Net Savings: $215,000

ADMINISTRATION AND SUPPORT DEPARTMENT FINDINGS

BIO-MEDICAL ENGINEERING

DEPARTMENTAL OVERVIEW

- The Bio-medical Engineering department's role is to ensure that the medical equipment used by HRSRH is in good working condition on an ongoing basis. The department provides maintenance and repair of bio-medical equipment, evaluation of new equipment purchases, and education of staff on using equipment (e.g., nurse orientation on use of new monitors).
- The department also provides bio-medical engineering services to other hospitals in the region as per agreements with HRSRH. – The program is staffed with 2 FTEs.
- There are 2,761 medical equipment items on inventory at HRSRH, many are past depreciation age and/or are post production.
- Staff complement:
    - In-house Bio-medical Engineering: 11 full time staff, 3 part time, 1 manager, 1 support
    - Regional Program: 2 full time staff
    - All staff are under 50 years of age, average years of service between 10 to 15, salary range is $40,000-$55,000, not much attrition or retirement expected in the near future.
- The department operates 5 days a week with on call for evening and weekends.
- The department has signed a $440,000 per year "front-lining" agreement with Service Master where HRSRH staff provide service to equipment, and bill the supplier $85/hour plus parts for doing the service in-house. The vendor provides the training. The objective of the agreement is to build expertise in-house and provide a two hour emergency service turn around time as opposed to 24-hour for an external service agreement (given HRSRH's geographic location).

BENCHMARKING ANALYSIS

- There was a 55% increase in Bio-medical engineering FTEs in 2000/01 compared to 1998/99 (from 12.1 to 18.7). This is reflected in a 57% increase in compensation expenses.
- Total equipment expenses at HRSRH have been steadily increasing over the last five years (note that the figures in the table reflect total equipment and not just medical equipment expenses).
- HRSRH bio-medical engineering department cost per weighted case is the highest in the cohort. The cost per weighted case for bio-medical engineering plus external maintenance for patient care departments is the second highest in the cohort (at $52.59). The cohort 25th percentile is $29.65, at which the savings for HRSRH are $1,174,038 (44% of expenses).

Exhibit 70 Bio-Medical Engineering Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02*
Total Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
FTEs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation per FTE	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Total Equipment Expenses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Equip Expenses per FTE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dept Cost per Equipment $	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]

* 2001/02 is annualized based on the first [illegible] quarter of data

Benchmark Cost per Weighted Case (excluding certain expenses)

HRSRH	$	[illegible]
25th Percentile	$	[illegible]
Median	$	[illegible]
75th Percentile	$	[illegible]

Potential Savings at 25th Percentile	$	[illegible]
Potential Savings % of Total Expenses		[illegible]

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Exhibit 76: Total Bio-Medical Engineering Department Expense & Maintenance Expense Over Total Direct Expense (2001/02)

Facility (Peer Group)	Bio-Medical Engineering Department Expenses	[illegible] Equipment External Maintenance Expenses	Total Department & Maintenance Expenses	% (Dept & Maint. Expense) / Total Direct Expenses
Grand River	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Reg.	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg.	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen.	[illegible]	[illegible]	[illegible]	[illegible]
HRSRH	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's Hosp.	[illegible]	[illegible]	[illegible]	[illegible]
	Mean			[illegible]
	25th Percentile			[illegible]
	50th Percentile			[illegible]
	75th Percentile			[illegible]
	Teach. Grp. 25th Percentile			[illegible]
	Teach. Grp. 50th Percentile			[illegible]
	Northern Grp. 25th Percentile			[illegible]
	Northern Grp. 50th Percentile			[illegible]

Exhibit 80 Total Bio-Medical Department Expenses & Maintenance Expenses/Weighted Case (2001/02)

Facility Description	Bio-Medical Engineering Department Expenses	Patient Care Department External Maintenance Expenses	Total Department & Maintenance Expenses	Total Department & Maintenance (Sum Net) Expenses	Weighted Cases	Expenses/ Weighted Cases
Grand River	$382,258	$591,456	$973,714	$482,314	24,524	$39.69
Credit Valley	$287,801	$803,910	$1,091,711	$504,059	23,163	$29.07
Lakeridge	$402,626	$1,690,241	$2,092,867	$1,115,393	58,239	$29.19
Humber River	$494,025	$1,558,761	$2,052,786	$1,356,656	45,482	$29.91
Trillium	$574,091	$1,714,564	$2,288,655	$1,231,782	41,133	$39.42
Rouge Valley	$591,146	$1,440,012	$2,031,158	$1,180,916	36,046	$32.85
Sault Area Hosp	$565,687	$610,331	$1,176,018	$559,282	17,852	$33.27
William Osler	$681,752	$2,500,047	$3,181,799	$1,808,273	32,762	$55.16
Royal Victoria	$389,615	$1,154,212	$1,543,827	$773,447	21,524	$36.56
Windsor Reg	$567,865	$2,162,286	$2,730,151	$1,178,314	30,543	$38.84
Thunder Bay Reg	$427,371	$1,316,746	$1,744,117	$1,209,440	27,803	$46.38
Kingston Gen	$535,556	$1,919,334	$2,408,494	$1,821,326	37,416	$48.67
HRSRH	**$2,156,621**	**$837,774**	**$2,994,395**	**$1,969,758**	**57,436**	**$52.39**
St. Joseph's - Ham	$808,055	$2,081,678	$3,140,714	$1,920,253	76,463	$52.66
	Mean					$36.24
	25th Percentile					$29.13
	50th Percentile					$34.62
	75th Percentile					$44.63
	Multi Site 25th Percentile					$29.91
	Multi Site 50th Percentile					$33.27
	Northern Ach 25th Percentile					$34.91
	Northern Ach 50th Percentile					$38.84

ISSUES

- Following the merger, staff had to be oriented on new instruments, which affected efficiencies and level of confidence with equipment.
- Standardization of equipment is under way; new technology is introduced on a regular basis.
- Previously, bio-medical staff were associated with specific patient care departments. With the merger, the staff were brought together as a consolidated department to support all other departments. This change did not receive much support from the staff, as they preferred working in the patient care units departments, although it was felt to be necessary.
- The minimum turn around time for service calls from vendors in southern Ontario is 24 hours. Some areas expect immediate maintenance, where bio-medical engineering has to identify what is critical (e.g., Life support devices) versus what can wait.
- The department performs some building services maintenance functions, such as for phones and paging systems.
- It is a challenge to ensure that in-house staff have volume to maintain competence and can focus on areas of specialization.

Exhibit 80:Total Bio-Medical Department Expenses & Maintenance Expenses/Weighted Case (2001/02)

Facility Description	*Bio-Medical Engineering Department Expenses*	*Patient Care Department External Maintenance Expenses*	*Total Department & Maintenance Expenses*	*Total Department & Maintenance Acute Net Expenses*	*Weighted Cases*	*Expenses/ Weighted Cases*
Grand River	$582,298	$391,496	$973,794	$482,314	24,320	$19.83
Credit Valley	$267,810	$813,900	$1,081,710	$504,959	25,163	$20.07
Lakeridge	$412,626	$1,680,241	$2,092,867	$1,115,335	38,203	$29.19
Humber River	$454,025	$1,598,761	$2,052,786	$1,336,656	45,482	$29.39
Trillium	$574,689	$1,714,364	$2,289,053	$1,251,782	41,155	$30.42
Rouge Valley	$319,146	$1,649,612	$1,968,758	$1,181,908	36,006	$32.83
Sault Area Hosps	$405,487	$669,531	$1,075,018	$593,282	17,832	$33.27
William Osler	$689,712	$2,390,997	$3,080,709	$1,898,275	52,782	$35.96
Royal Victoria	$189,603	$1,154,202	$1,343,805	$779,447	21,320	$36.56
Windsor Reg	$567,843	$2,162,288	$2,730,131	$1,978,514	50,943	$38.84
Thunder Bay Reg	$427,371	$1,516,746	$1,944,117	$1,299,449	27,895	$46.58
Kingston Gen	$959,330	$1,509,154	$2,468,484	$1,821,126	37,416	$48.67
HRSRH	**$2,036,621**	**$957,774**	**$2,994,395**	**$1,969,753**	**37,458**	**$52.59**
St. Joseph - Ham	$468,069	$2,681,635	$3,149,704	$1,920,213	36,463	$52.66
	Mean					$36.20
	25th Percentile					$29.65
	50th Percentile					$34.62
	75th Percentile					$44.65
	Multi Site 25th Percentile					$29.90
	Multi Site 50th Percentile					$33.27
	Northern/Sole 25th Percentile					$34.91
	Northern/Sole 50th Percentile					$38.84

ISSUES

- Following the merger, staff had to be oriented on new instruments, which affected efficiencies and level of confidence with equipment.
- Standardization of equipment is under way; new technology is introduced on a regular basis.
- Previously, bio-medical staff were associated with specific patient care departments. With the merger, the staff were brought together as a consolidated department to support all other departments. This change did not receive much support from the staff, as they preferred working in the patient care units departments, although it was felt to be necessary.
- The minimum turn-around time for service calls from vendors in southern Ontario is 24 hours. Some areas expect immediate maintenance, where bio-medical engineering has to identify what is critical (e.g., Life-support devices) versus what can wait.
- The department performs some building services maintenance functions, such as for phones and paging systems.
- It is a challenge to ensure that in-house staff have volume to maintain competence and can focus on areas of specialization.

- HRSRH has a $75 million equipment replacement plan as part of the capital development project. Bio-medical engineering staff will be responsible for much of the evaluation, training, and maintenance of this equipment.

RECENT INITIATIVES

- The department manager has aggressively launched a number of initiatives to improve the effectiveness of the department.
- Developed and implemented a regular, routine maintenance schedule, which is expected to lead to a decrease in demand for repairs.
- Since January 2002, developed and implemented a workload measurement system:
    - Allows resource allocation and productivity measures
    - Every item has a workload value (estimated time) based on past preventive maintenance time
    - Measure actual time, and compare with estimates
- Moving forward on maintenance and repair procedure standardization.

RECOMMENDATIONS

187.Elimination of Service Master Agreement. Annual cost of $440,000, only around 50% recovered ($200,000 savings):

- Although the program may be economically advantageous for the hospital in the long run (post warranty period expiry for the covered instruments), it is very costly to maintain given the hospital's current financial situation. A re-examination of the cost-benefit of the program is recommended once the hospital has achieved a healthy fiscal position.
- Very few instruments require less than 24 hours service time.
- For life support equipment, develop emergency repair protocol using in-house staff.

188. Reduce staff complement (from its 2000/01 levels) by 4 FTEs ($230,000) in first year and by another 4 FTEs through attrition over the next five years. This will bring department expenses closer towards the cohort median.

- Total Savings Target:
    - $430,000 (14%) within one year.
    - An additional $230,000 (8%) within three years.
- Resulting Expenditure / Indicator Levels:
    - One year: $2.4 million / CPWC=$42.15
    - Five years: $2.17 million / CPWC=$38.11 (under 75th percentile).

CENTRAL PROCESSING (OR)

DEPARTMENTAL OVERVIEW

- This department provides surgical supply sterilization and reprocessing for the operating rooms at the SJHC and Memorial sites.
- Although, for the purposes of this review, central processing is under Materials Management, it is managed by the operating room.
- Before the merger, the Laurentian hospital had full case cart system, the Memorial had a partial case cart system, and the SJHC had no case cart system (RN staff picked all surgical supplies).
- The department has since established a case cart system at SJHC and Memorial sites, added new staff (2.5 FTE's) and implemented a portering system.
- Staffing is approximately 50 FTEs.

BENCHMARKING ANALYSIS

- Since central processing is reported under Materials Management in the MIS Trial Balance, separate indicators for central processing cannot be easily calculated. The Materials Management section provides total trends and benchmarking data that includes central processing. Eight of the cohort hospitals report central processing as a separate functional centre within Materials Management. A central processing department FTE per OR case indicator was calculated from their data.
- HRSRH has the highest staffing number in the cohort of hospitals that submitted central processing data.
- Central processing FTE's per 1000 cases is 2.59, compared with the cohort median of 2.51 and 25th percentile of 1.66.

M121

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Exhibit 85 - Total Central Processing Department FTEs per 1,000 Cases

Hospital	FTEs	OR Cases	FTE per 1,000 Cases
William Osler	19.1	38,947	0.49
Credit Valley	14.9	12,507	1.19
Peterborough Civ	27.2	16,415	1.66
Thunder Bay Reg	29.4	12,490	2.35
Grand River	23.1	9,176	2.51
SRH	48.0	18,316	2.62
St. Joseph - Ham	46.3	16,217	2.85
Kingston Gen	26.4	8,003	3.29
North Bay Gen	31.5	7,689	4.09
Mean			1.90
25th Percentile			1.66
50th Percentile			2.51
75th Percentile			2.85

ISSUES

- Nurses and physicians have resisted the introduction of generic trays.
- There is an outdated OMNI server system in the Operating Room, which limits decision support and management optimization capabilities.
- The department's perception is that the presence of ORs on two sites constitutes a major hurdle to additional efficiencies due to the cost of transporting supplies to the ORs. Currently, 2.5 FTEs are dedicated to the transport of supplies.

RECENT INITIATIVES

- A consulting company, Logibelion, assisted with implementing Just In Time, standardizing case carts, defining job functions and transferring the role of handling supplies from nurses to core technicians in the OR.
- Standardization of instruments is making progress but several non-generic trays and diverse physician's preference lists remain.
- Implementation of an information system linking OR booking and pick list to reprocessing was approved in Fall 2001 and will be implemented by April 2003.
- Tracking of instruments using a production line system 24hr/day.
- Moving towards multi-skilling and cross training to create further re-processing efficiencies = opportunities to improve the turn around time from cart to OR to cart.

Exhibit [illegible]: Total Central Processing Department FTEs per 1,000 Cases

Hospital	FTEs	OR Cases	FTE per 1,000 Cases
William Osler	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]
Peterborough Civic	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]
HRSRH	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]
Mean			[illegible]
25th Percentile			[illegible]
50th Percentile			[illegible]
75th Percentile			[illegible]

ISSUES

- Nurses and physicians have resisted the introduction of generic trays.
- There is no outdated [illegible] system in the Operating Room, which limits decision support and management optimization capabilities.
- The department's perception is that the presence of ORs on two sites constitutes a major hurdle to additional efficiencies due to the costs of transporting supplies to the ORs. Currently, 2.0 FTEs are dedicated to the transport of supplies.

RECENT INITIATIVES

- A consulting company, [illegible], assisted with implementing just-in-time, standardizing case carts, defining job functions and transferring the role of handling supplies from nurses to [illegible] technicians in the OR.
- Standardization of instruments is making progress but several non-generic trays and diverse physician's preferences still remain.
- Implementation of an information system linking OR booking and pick list to reprocessing was approved in Fall 2001 and will be implemented by April 2003.
- Tracking of instruments using a production line system [illegible].
- Moving towards multi-skilling and cross-training to create further reprocessing efficiencies – opportunities to improve the turn around time from [illegible] to OR [illegible].

RECOMMENDATIONS

(88) Re-examine the option of consolidating of all central processing services at one site prior to the overall hospital move to the new facility.

(89) Reduce staff complement by 1.0 FTE immediately (Savings [illegible]), another 1.0 FTE upon single site consolidation (Savings [illegible]) through:

- Increased productivity;
- OR information system implementation for ordering;
- Reduction in processing turnaround time;
- Streamlined processes;
- Multi-skilled workers and cross-training;
- Continued implementation of standardized generic pick lists and more homogeneous physician preference lists.

- Total Savings: [illegible]

[illegible]

[illegible]

- [illegible]
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Exhibit 83: Total Food Services Net Expenses per Patient Day and Net Expenses over Total Direct Expenses (2001 / 02)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Day*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*
St. Joseph - Ham	$3,578,174	212,858	$16.81	$3,578,174	127,849,611	2.8%
Trillium	$5,211,234	282,767	$18.43	$5,211,234	148,861,997	3.5%
Rouge Valley	$3,489,328	180,300	$19.35	$3,489,328	119,174,989	2.9%
Sault Area Hosps	$2,497,500	118,147	$21.14	$2,497,500	65,124,559	3.8%
Peterborough Cir	$2,852,880	134,103	$21.27	$2,852,880	81,390,589	3.5%
Kingston Gen	$3,253,261	146,761	$22.17	$3,253,261	129,668,606	2.5%
Grand River	$4,063,888	170,241	$23.87	$4,063,888	92,255,697	4.4%
Royal Victoria	$2,457,287	102,623	$23.94	$2,457,287	68,972,414	3.6%
North York Gen	$3,913,740	161,788	$24.19	$3,913,740	126,463,731	3.1%
Humber River	$4,769,672	185,273	$25.74	$4,769,672	129,418,054	3.7%
Credit Valley	$3,562,087	135,345	$26.32	$3,562,087	104,907,409	3.4%
William Osler	$6,643,278	252,122	$26.35	$6,643,278	169,794,773	3.9%
North Bay Gen	$1,740,505	64,665	$26.92	$1,740,505	46,256,811	3.8%
Windsor Reg	$6,765,117	250,663	$26.99	$6,765,117	175,625,472	3.9%
Thunder Bay Reg	$3,428,928	120,598	$28.43	$3,428,928	88,134,859	3.9%
Lakeridge	$6,379,542	220,789	$28.89	$6,379,542	146,962,230	4.3%
HRSRH	$5,660,771	192,459	$29.41	$5,660,771	152,284,309	3.7%
	Mean		$24.13			3.6%
	25th Percentile		$21.27			3.4%
	50th Percentile		$24.19			3.7%
	75th Percentile		$26.92			3.9%
	Multi Site 25th Percentile		$21.50			3.5%
	Multi Site 50th Percentile		$24.97			3.7%
	Northern/Sole 25th Percentile		$22.17			3.6%
	Northern/Sole 50th Percentile		$23.94			3.8%

ISSUES

- Of all departments at HRSRH, the Food Services department likely had the most challenging time dealing with the after effects of the merger. There were significant changes in culture, job descriptions, philosophies, and expectations of the department, as well as the moves of food production and retail facilities. For the first year, management spent time understanding different sites while looking for commonalities
- There was significant financial impact as a result of the merging of three CUPE contracts, such as the porters' pay equity leading to a rollback in salary by $1/hr and several changes to the contract's language. When contract is settled, the impacts will be retroactive to April 2001.
- The first full departmental budget was produced for 1999/00. Before 1999/00, financial reporting was very poor.
- Physical reconfiguration challenges:
    - All 600 daily meals are prepared at Memorial.
    - The Laurentian cafeteria was closed and replaced by a temporary cafeteria stationed out of a trailer. The department also lost the tugger cart & belt line necessitating staff to travel long distances. There are no refrigeration facilities at Laurentian, meals are re-thermed, then sent back to Memorial for dishwashing. Poor location and weekend closures led to a decrease in Laurentian cafeteria sales by approximately $145,000.

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ISSUES

- Of all departments at HRSRH, the Food Services department likely had the most challenging time dealing with the after effects of the merger. There were significant changes in culture, job descriptions, philosophies, and expectations of the department, as well as the moves of food production and retail facilities. For the first year, management spent time understanding different sites while looking for commonalities
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  - All 600 daily meals are prepared at Memorial.
  - The Laurentian cafeteria was closed and replaced by a temporary cafeteria stationed out of a trailer. The department also lost the tugger cart & belt line necessitating staff to travel long distances. There are no refrigeration facilities at Laurentian, meals are re-thermed, then sent back to Memorial for dishwashing. Poor location and weekend closures led to a decrease in Laurentian cafeteria sales by approximately $145,000.

  - SJHC: Central re-therm implemented recently using equipment purchased from Thunder Bay hospital. There is a partial kitchen and dishwashing. The site is the oldest of the three and has poor elevator service.
  - Memorial: Similar issues with aging physical plant and poor elevator service
  - All sites suffer from staff inefficiency, poor dish rooms, and plumbing and drainage problems.
  - Functional program had to be modified several times to achieve minimum requirements. Belts will not be useable; will be using a dedicated elevator. De-centralized re-therm areas will be available. New site size is workable and kitchen is adequate for 600 beds. The main kitchen is part of Phase 2 of the construction project.

- Lots of food waste at a cost of $100,000 a year - due to incorrect diet orders, delayed meals, over-supply, etc.

- No system for billing nursing units and other departments that order food trays and other food supplies. Billing system needs to be implemented to control costs by reducing usage by staff at the nursing units and other departments due to the disincentive of having to pay for it out of their budgets.

- Staffing:

  - Retention issues – food services is entry point into hospital. Many staff move on to other areas in the hospital as soon as probation is over leading to a high staff turnover.
  - Recruitment is not an issue except for slow posting process. There was a hiring freeze last year that led to an increase in overtime.
  - Increase in sick time, modified work time (25% accommodated workers) & overtime

- 10 year hospital exclusive contract with Pepsi led to loss of vending profits ($12,000 per year)

RECENT INITIATIVES

- Significant improvements have been achieved in the budgeting process wih the assignment of a financial consultant to the department.

- Process being developed to track outpatient food costs to the clinics. Partnership with London Health Sciences who are the re-therm experts and are experiencing similar problems with tracking outpatient costs; determination of outpatient days = 3 trays. Non-tray food supplies charged at $3.50 as equivalent to an outpatient tray.

- Since December 2001, source products are made in-house (previously purchased) which has reduced food costs.

- Innovative staff scheduling has been put in place – Monday to Friday day-shifts for full-time staff and evening/weekend-shifts for part-timers

- CUPE change limiting newly hired staff from applying to positions in other departments until six months after their hiring has reduced turnover.

- Although food costs will increase, re-therm technology is expected to reduce labour costs significantly. The department plans to retain full-time cooks for retail component.

- IS food system provides ability to bill departments – 2.66 trays/patient day, 0.4 patient days saved.
- Since 2001, more source products are produced in-house, reducing food costs by $1 per day.

RECOMMENDATIONS

191.Pre-single site – target total cost reduction of $900,000:

- Elimination of $400,000 of retail food losses by either contracting out all non-patient food services – this would entail a reduction of $1.8 million in non-patient food expenses (labour, supplies, and equipment) – or another strategy that would achieve a break-even point in retail food operations.
- Reduction of $500,000 in patient food costs by achieving the median cohort food cost per day of $11.40 through improved volume purchasing agreements, brand standardization, and implementation of system for tracking and invoicing all tray and bulk food deliveries to the nursing units and other departments.

192.Post single site, total additional target cost reduction of $560,000 over two years:

- Reduce transportation cost by $160,000.
- A reduction of $400,000 in compensation costs to achieve the median cohort compensation per day of $16.75 (vs. $18.87 currently). This would be achieved through improved productivities following the consolidation of food services.

- **Total Savings Target:**
  - $900,000 (16%) within one year
  - An additional $560,000 (10%) within five years
- Resulting Expenditure/Indicator Levels:
  - Pre single site: $4.8 million/Cost/Day = $24.73
  - Post single site: $1.18 million/CPWC = $37.48 (under 75th percentile).

HEALTH RECORDS

DEPARTMENTAL OVERVIEW

- Currently, one department provides Health Records Services to the three acute sites. Health Records is located in a professional building off-site from the acute care buildings.
- The department relocated to the current location to allow for the construction at the Laurentian site during July 2001. Up to that point, the service was provided in three separate departments at each acute care site.
- Staff Complement

    - Management 2 FTEs
    - Secretaries 2 FTEs
    - Clerks 21 FTEs;
    - Site Support 3 FTEs
    - Coding:
    - HRAs 5 FTEs
    - HRTs 8 FTEs
    - Transcriptionists20 FTE's

BENCHMARKING ANALYSIS

- Health Records department expenses have increased steadily over the last five years. There was a significant increase in 2000/01 vs. 1999/2000 with a 40% increase in compensation expenses (16.3% increase in FTEs)
- The Health Records cost per weighted case at HRSRH was $91.97, well above the cohort 75th percentile cohort of $76.21. If the 25th percentile benchmark is to be achieved, $1.88 million (or 34.5%) of expenditures would need to be removed (based on 2000/01 numbers).
- The 2001/02 numbers (annualized based on three quarters of actual data) show a reduction in the cost per weighted case although the final expenses for the year were not yet available.

Exhibit 84: Health Records Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 2,333,712	$ 2,515,155	$ 2,421,636	$ 3,620,401	$ 3,055,987
% Change		7.8%	-3.7%	49.5%	-15.6%
Compensation Expenses	$ 2,030,085	$ 2,266,336	$ 2,189,884	$ 3,072,000	$ 2,643,977
% Change		11.6%	-3.4%	40.3%	-13.9%
FTEs	49.9	52.6	54.3	63.1	56.0
% Change		5.3%	3.2%	16.3%	-11.4%
Compensation per FTE	$ 40,688	$ 43,957	$ 40,327	$ 48,666	$ 47,262
% Change		8.0%	-8.3%	20.7%	-2.9%
Total Weighted Cases	38,742	39,258	37,730	37,458	37,458
% Change		1.3%	-3.9%	-0.7%	0.0%
Weighted Cases per FTE	776	763	695	595	669
Dept Cost per Wtd Case	$ 60.24	$ 64.10	$ 64.18	$ 96.65	$ 81.58

** 2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Weighted Case (excludes certain expenses)

HRSRH	$ 91.97
25th Percentile	$ 60.24
Median	$ 70.30
75th Percentile	$ 76.21

Potential Savings at 25th Percentile	$ 1,188,560
Potential Savings % of Total Expenses	38.9%

ISSUES

- Off-site rent is estimated to be $80,000 per year.
- With the main department location being off-site, the department has been required to continue to maintain one satellite office with one staff member at each site.
- An estimated 2 FTEs are required to maintain mail services for physicians.
- Courier cost to transport records between the sites and the department is estimated at $84,000 per year.
- Recent coding reviews identified an opportunity to improve clinical reporting. CHM reviewed cases from Q2 Fiscal 2001/2002. Findings of this review indicated an under reporting of 7.3% with the impact stratified to be about 5.5%.
- Along with all Health Records departments in Ontario, conversion is currently taking place of the education and implementation to a new classification system – ICD-10.
- The physical layout in the new facility (on one site) has been designed with the understanding that an electronic record would be in place. This will not occur in the foreseeable future.

RECENT INITIATIVES

- Of the former 3 departments, only one department used the industry standard of terminal digit filing system. Now, all records of HRSRH have been converted to this system.
- All health care forms used for patient care have been standardized since the merger of the three former hospitals.
- Transcription services have instituted electronic authentication. Reports can be faxed to nursing units and physician offices.
- Currently, the department is changing the chart completion process.
- Department reports currently being under budget.

RECOMMENDATIONS

103. Management reports productivity targets set for coding are not being met and can be achieved. (Equivalent to savings of $90,000)

104. Review transcription practices. Review current practice of the number of types of transcribed documents (Equivalent to savings of $135,000)

105. Savings opportunity appears to exist with departmental workflow analysis & redesign. (Equivalent to savings of $135,000)

106. Examine transferring all mail delivery function to mail/transportation (Equivalent to savings of $85,000)

107. The department should review the transcription services productivity and undertake a review to examine outsourcing opportunities.

Post Single Site Consolidation Savings:

- Department reports potential savings with one site consolidation in addition to savings of courier and off site rent costs. (Equivalent to savings of $225,000)
- Office space rental and utilities (Savings= $90,000; currently restructuring dollars)
- Courier costs (Savings=$86,000; currently restructuring dollars)
- Total potential departmental savings $806,000

HOUSEKEEPING

DEPARTMENTAL OVERVIEW

- The department provides the following services to the three sites of HRSRH:
    - General daily cleaning
    - Special cleaning e.g., infection control
    - Cyclical cleaning and maintenance, e.g., refinishing floors
    - Waste management – collection, segregation, and packaging. There are seven types of waste including general, hazardous and recyclables.
    - Provides intra- and inter-site moving services by relying on a clinical services van.
- Staffing
    - [illegible] FTEs: [illegible] Full Time and [illegible] Part Time staff
    - Part time hours are variable; have pre-booked hours, except for vacations.
- One manager and three supervisors (one supervisor per site).

BENCHMARKING ANALYSIS

- Expenses have been increasing, with a [illegible]% increase in total expenses and in compensation expenses over the last five years. There was a [illegible]% increase in Housekeeping FTEs between 1997/98 and 2001/02.
- The cost per square metre for HRSRH Housekeeping is $[illegible] (based on [illegible] sq. metres). Square footage data is not reported reliably in the MIS data and so external data sources had to be used. Based on recent benchmarking results from the HayGroup, the median cost per sq. metre for the HRSRH cohort is $[illegible] and the 25th percentile is $[illegible].
- Housekeeping provided moving services during the restructuring period, for which the costs had been charged to restructuring. However, this resulted in higher Housekeeping costs due to replacement of staff working on the moves, thereby increasing hours, and often at overtime salaries for normal operations.

[illegible]

	1997/98	1998/99	1999/2000	2000/01	2001/02
Total Expenses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation Expenses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
FTEs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation per FTE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Square Metres	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Square Metres per FTE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cost per Sq Metre	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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RECOMMENDATIONS

198 Examine opportunities for increasing the ratio of supervisor to staff. The department should then:

- implement a regular audit program,
- conduct performance evaluations on a regular basis, and
- set and enforce high productivity standards for housekeepers.

199 Productivity improvements: increase labour productivity in order to achieve 25th percentile benchmark performance yielding a total savings of $340,000 over two years (net of the additional investment in supervisory resources).

- **Total net savings target: $340,000 (4.3% of current expenditures).**

INFORMATION SYSTEMS

DEPARTMENTAL OVERVIEW

- The Information Systems department provides centralized computer support services to the three main HRSRH sites and a number of satellite sites. The department is also the lead hospital support for the North Eastern Ontario Network (NEON), a collaborative partnership with regional hospitals for the provision of Meditech-based hospital information systems services.
- Staffing:
    - 16 FTEs as part of NEON (North Eastern Ontario Network) partnership. All 16 FTEs are required for Meditech support even if hospital was not part of NEON. Five of the sixteen are paid by the other hospital partners in the network.
    - 11 FTEs outside NEON
    - All Full time, 2 Part time at Help Desk
    - Breakdown of positions under director
    - IS 27 FTEs
    - Decision Support 3 FTEs
    - Clinical Information 1.5 FTEs
    - Library 2 FTEs
    - Tele-health 1 FTE
    - Currently have 5 vacancies that have not been replaced, but back filled with other staff
    - Will be hiring one FTE for the financial module
    - No issues identified with sick time, overtime or staff turnover
- Approximately 90 servers (45 Meditech, 45 other). Provide Support (Help Desk) for GRASP, Cyber, Meditech, Stand alone systems, Web, E-mail, etc.
- IS strategy has been developed including a project charter and business plan.
- HRSRH has worked to develop strategic partnerships (within the northeast) that are aligned wit the provincial direction for regional electronic patient record systems.
- Information Management Council with members from IS, Health Records, Vice Presidents and Finance.
    - Meet monthly to identify needs and priorities. For each initiative, a project sponsor and analysts are assigned to facilitate design and completion.
    - Prioritized about 130 projects, with 40 identified as required. Bottleneck is at application level.

BENCHMARKING ANALYSIS

- Department expenses have more than doubled in 2000/01 vs. 1999/00. NEON recoveries as reported do not account for the increase.
- HRSRH Information Systems cost per weighted case ($51.69) is above the cohort median ($43.50).

Exhibit 86: Information Systems Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 2,604,420	$ 1,569,234	$ 2,665,660	$ 5,778,644	$ 5,833,881
% Change		-39.7%	69.9%	116.8%	1.0%
Net Expenses	$ 2,330,830	$ 1,560,114	$ 2,086,269	$ 4,950,156	$ 4,992,064
% Change		-33.1%	33.7%	137.3%	0.8%
Compensation Expenses	$ 906,709	$ 467,952	$ 803,223	$ 2,067,488	$ 1,898,001
% Change		-48.4%	71.6%	157.4%	-8.2%
FTEs	14.0	9.1	16.9	33.0	34.1
% Change		-35.3%	86.4%	95.1%	3.2%
Compensation per FTE	$ 64,657	$ 51,554	$ 47,467	$ 62,620	$ 55,700
% Change		-20.3%	-7.9%	31.9%	-11.1%
Total Hospital Expenses	163,724,656	169,562,047	180,549,642	204,886,636	223,047,243
% of Hospital Expenses	1.6%	0.9%	1.5%	2.8%	2.6%

* *2001/02 is annualized based on first three quarters of data*

Benchmark Cost per Weighted Case (excludes certain expenses)

HRSRH	$	50.69
25th Percentile	$	33.65
Median	$	43.50
75th Percentile	$	52.91

Potential Savings at 25th Percentile	$	630,417
Potential Savings % of Total Expenses		33.6%

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M121

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Exhibit 87: Total Information Systems Expenses Over Total Direct Expenses and Expenses per Weighted Case (2001/02)

Multi-Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Yes	No	Humber River	$1,933,846	$129,418,034	1.49%	$1,194,013	45,482	$26.25
Yes	Yes	Thunder Bay Reg	$1,323,861	$88,134,859	1.50%	$853,317	27,895	$30.59
Yes	No	Trillium	$2,490,964	$148,861,997	1.67%	$1,312,308	41,155	$31.89
Yes	No	William Osler	$3,053,059	$169,794,773	1.80%	$1,770,606	52,782	$33.55
Yes	Yes	Windsor Reg	$2,670,163	$175,625,472	1.52%	$1,714,279	50,943	$33.65
Yes	Yes	Peterborough Civ	$1,480,089	$81,390,589	1.82%	$821,518	24,089	$34.10
Yes	No	Rouge Valley	$2,555,381	$119,174,989	2.14%	$1,430,322	36,006	$39.72
No	Yes	Royal Victoria	$1,591,677	$68,972,414	2.31%	$866,377	21,320	$40.64
Yes	Yes	Grand River	$2,284,326	$92,255,697	2.48%	$1,057,829	24,320	$43.50
Yes	No	Lakeridge	$3,344,805	$146,962,230	2.28%	$1,700,744	38,203	$44.52
No	No	Credit Valley	$2,774,915	$104,597,499	2.65%	$1,249,490	25,165	$49.65
Yes	**Yes**	**HRSRH**	**$2,966,205**	**$152,284,309**	**1.95%**	**$1,898,920**	**37,458**	**$50.69**
Yes	Yes	North Bay Gen	$1,160,100	$46,256,811	2.51%	$759,432	14,353	$52.91
Yes	Yes	Sault Area Hosps	$2,164,331	$65,124,559	3.32%	$1,116,309	17,832	$62.60
No	No	St. Joseph - Ham	$3,978,586	$127,849,611	3.11%	$2,311,910	36,463	$63.40
Yes	Yes	Kingston Gen	$3,658,863	$129,668,606	2.82%	$2,699,329	37,416	$72.14
Yes	No	North York Gen	$4,833,778	$126,463,731	3.82%	$2,784,438	37,414	$74.42
			Mean		2.31%			$46.13
			25th Percentile		1.80%			$33.65
			50th Percentile		2.28%			$43.50
			75th Percentile		2.65%			$52.91
			Multi Site 25th Percentile		1.70%			$33.57
			Multi Site 50th Percentile		2.05%			$41.61
			Northern/Sole 25th Percentile		1.82%			$34.10
			Northern/Sole 50th Percentile		2.31%			$43.50

ISSUES

- NEON partnership – 8 participating hospital corporations have pooled Meditech services, and allowing access to MIS data from participating hospitals. HRSRH manages all servers and applications with 16 FTEs as part of NEON costs. HRSRH recovers a portion of costs for providing NEON support.
    - Issues related to NEON:
    - All updates go through NEON steering committee, causing delays in any changes required for HRSRH.
    - Costs are split among hospitals based on the number of beds. Although HRSRH accounts for 66% of costs, each corporation receives only one vote for decision-making.
    - Substantial financial penalty for pulling out of NEON before Summer 2003
    - Not enough emphasis on data collection, storage and use. Currently hospital has too many manual systems, with paper systems, and not enough emphasis on data collection, storage and use when tools are available. Results in manual report creation or lack of usable data.
    - E.g., GRASP is not being collected by all units while some units are collecting but not entering into system.
    - Incident reports – IS provided an electronic solution, but nurses were not encouraged to use it and continue to complete paper reports
- Initiating a project to 'network' or house PC drive documents. PCs have not been backed up. This will be a large undertaking and will require resources.

Exhibit 87: Total Information Systems Expenses Over Total Direct Expenses and Expenses per Weighted Case (2001/02)

Multi Site	Northern / Sub Provider	Facility Description	2001/2002 Functional Centre Net Expense	2001/2002 Total Direct Net Expense	Net Functional Centre Expense / Total Direct Expense	2001/2002 Functional Centre [illegible] Net Expense	2001/2002 Weighted Cases	Expense / Weighted Case
Yes	No	Humber River	$1,933,846	$129,419,034	1.49%	$1,294,013	43,892	$29.2[illegible]
Yes	Yes	Thunder Bay Reg	$1,325,064	$88,134,859	1.50%	$935,317	27,955	$34.[illegible]
Yes	No	Trillium	$2,490,564	$149,061,997	1.67%	$1,312,508	41,155	$31.8[illegible]
Yes	No	William Osler	$3,053,059	$169,794,773	1.80%	$1,774,006	52,762	$33.6[illegible]
Yes	Yes	Windsor Reg	$2,670,165	$175,625,472	1.52%	$1,714,275	50,769	$33.6[illegible]
Yes	Yes	Peterborough Civ	$1,460,089	$81,390,589	1.82%	$821,308	24,085	$34.1[illegible]
Yes	No	Rouge Valley	$2,535,301	$119,174,989	2.14%	$1,430,522	36,066	$39.72
No	Yes	Royal Victoria	$1,591,677	$68,972,414	2.31%	$966,577	23,320	$41.4[illegible]
Yes	Yes	Grand River	$2,294,526	$92,253,657	2.49%	$1,057,829	24,520	$43.[illegible]
Yes	No	Lakeridge	$3,344,805	$146,962,239	2.28%	$1,709,741	38,205	$44.5[illegible]
No	No	Credit Valley	$2,774,515	$104,597,479	2.65%	$1,249,490	25,165	$49.6[illegible]
Yes	**Yes**	**HRSRH**	**$2,066,205**	**$132,204,[illegible]**	**1.59%**	**$1,[illegible]**	**57,[illegible]**	**[illegible]**
Yes	Yes	North Bay Gen	$1,160,100	$46,256,411	2.51%	$739,452	14,355	$52.[illegible]
Yes	Yes	Sault Area Hosps	$2,064,358	$63,124,559	3.32%	$1,116,509	17,932	$62.[illegible]
No	No	St. Joseph - Ham	$3,978,986	$127,849,633	3.11%	$2,313,910	36,467	$63.4[illegible]
Yes	Yes	Kingston Gen	$3,639,865	$125,649,696	2.92%	$2,699,525	37,404	$72.1[illegible]
Yes	No	North York Gen	$4,633,776	$126,463,75[illegible]	3.62%	$2,784,436	37,414	$74.4[illegible]
		Mean			2.38%			$46.1[illegible]
		25th Percentile			1.60%			$35.6[illegible]
		50th Percentile			2.29%			$43.9[illegible]
		75th Percentile			2.65%			$52.9[illegible]
		Multi Site 25th Percentile			1.70%			$35.1[illegible]
		Multi Site 50th Percentile			2.09%			$40.4[illegible]
		Northern/Sole 25th Percentile			1.82%			$34.1[illegible]
		Northern/Sole 50th Percentile			2.51%			$43.9[illegible]

ISSUES

- NEON partnership – 8 participating hospital corporations have pooled Meditech services, and allowing access to MIS data from participating hospitals. HRSRH manages all servers and applications with 16 FTEs as part of NEON costs. HRSRH recovers a portion of costs for providing NEON support.
  - Issues related to NEON:
  - All updates go through NEON steering committee, causing delays in any changes required for HRSRH.
  - Costs are split among hospitals based on the number of beds. Although HRSRH accounts for 66% of costs, each corporation receives only one vote for decision-making.
  - Substantial financial penalty for pulling out of NEON before Summer 2003
  - Not enough emphasis on data collection, storage and use. Currently hospital has too many manual systems, with paper systems, and not enough emphasis on data collection, storage and use when tools are available. Results in manual report creation or lack of usable data.
  - E.g., GRASP is not being collected by all units while some units are collecting but not entering into system.
  - Incident reports – IS provided an electronic solution, but nurses were not encouraged to use it and continue to complete paper reports
- Initiating a project to 'network' or house PC drive documents. PCs have not been backed up. This will be a large undertaking and will require resources.

RECENT INITIATIVES

- New facility has mostly fibre optics, some CAD5. Some satellites have internet access.

RECOMMENDATIONS

200. Opportunity to renegotiate NEON contract in 2003, to ensure fair distribution of voting shares. Goal to reduce downtime and work due to delays in Meditech modifications (Savings=$100,000 over two years).

201. Review and optimize computer equipment and software purchasing practices to (Savings=$50,000).

- **Total Savings: $150,000**

MATERIALS MANAGEMENT

DEPARTMENTAL OVERVIEW

- This department provides purchasing, shipping/receiving, stocking/picking, and warehousing of most supplies and drugs used by HRSRH, and printing services. It also provides linen purchasing and distribution services, although the expenses and activities for these are reported in their respective MIS functional centres.

  - June 2000 - moved to off site warehouse to acquire more space during the construction phase
  - Sept 2000 - consolidated inventory for the three sites
  - Apr/May 2001 - completion of new systems, procedures and policy application

- Centralized off site warehouse provides regular and courier delivery of supplies to sites.

- Acquired Pharmacy inventory (except narcotics) in 2001, because of inefficiencies present previously.

- Materials Management Staffing Complement:

  - Number of FTEs relatively stable over last 3 years, about 32 FTEs
  - 4 positions added in 2001 with Pharmacy inventory
  - Around 50/50 split between full and part time and some casual

- According to the HRSRH cost centre reports, the cost centre breakdown is as follows:

Materials Management	$ 1,650,299	33.6 FTEs
Printing	$ 270,865	2.7 FTEs
Central Processing	$ 3,288,286	49.3 FTEs

  - Central Processing – no longer part of MM, but part of surgical program (SPD). These costs are included in the MM benchmarking numbers.
  - MM area is responsible for linen supply, but linen supply costs ($2.6M) are charged to departments or Laundry & Linen functional centre in MIS data, and not included in the MM benchmarking numbers.

- All supervisors are new (less than a year in their position).

- Supply costs – 60% inventory, 40% supplies directly to units/sites (often high-cost, specialty items). Moving to increase the percentage of inventory items.

- All requisitions go through the Materials Management department (no direct purchases by other hospital departments except for food supplies which are purchased by Food Services, and some stationery supplies).

BENCHMARKING ANALYSIS

- Materials Management expenses, as reported in the MIS Trial Balance, have fluctuated over the last five years. Reporting variations and high staff turnover following the hospital merger are likely responsible for some of this.

- The MM functional centre data includes three separate HRSRH cost centres: Materials Management, Printing, and Central Processing (managed as part of the Operating Room at HRSRH).
- The HRSRH MM cost per weighted case of [illegible] is well above the cohort 75th percentile ([illegible]). HRSRH MM net functional centre costs over hospital net direct costs ([illegible]) are also above the cohort 75th percentile of [illegible]. In addition, the total functional centre net expenses ([illegible] million) are considerably higher than all the hospitals in the cohort, except for Kingston General Hospital.

Exhibit [illegible]: Materials Management (including Central Processing) Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02*
Total Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation Expenses	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
FTEs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Compensation per FTE	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Total Supply Expenses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
% Change		[illegible]	[illegible]	[illegible]	[illegible]
Supply Expenses per FTE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dept Cost per Supply $	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]	$ [illegible]

*2001/02 is annualized based on first three quarters of data

Benchmark Cost per Weighted Case (excludes certain expenses)

HRSRH	$	[illegible]
25th Percentile	$	[illegible]
Median	$	[illegible]
75th Percentile	$	[illegible]

Potential Savings at 75th Percentile	$	[illegible]
Potential Savings % of Total Expenses		[illegible]

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Exhibit 89: Total Materials Management Net Expenses Over Total Direct Expenses and Net Expenses per Weighted Case (2001/02)

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			Mean		[illegible]			[illegible]
			25th Percentile		[illegible]			[illegible]
			50th Percentile		[illegible]			[illegible]
			75th Percentile		[illegible]			[illegible]
			[illegible]		[illegible]			[illegible]
			[illegible]		[illegible]			[illegible]
			[illegible]		[illegible]			[illegible]
			[illegible]		[illegible]			[illegible]

ISSUES

- The department is currently challenged with the complexity and costs associated with operating over four sites (warehouse and three hospital sites).
- There may be a warehousing space constraint in the new facility. The functional program assumed Just In Time inventory management in determining required space. This may be problematic in Sudbury, given geographic limitations. The following is a space comparison of pre- and post- new site (Phases 1 and 2):
  - Original warehouse space on three sites: approximately 10,000 sq ft (6,000 at Laurentian)
  - off-site (current): 15,000 sq ft, stacked (at triple ceiling height) = 45,000 sq ft
  - new site: 7,000 sq ft, 10 ft ceilings (may require 3 shifts to manage – 1 receiving, 2 stocking, 3 picking). Over the last few years have had poor application of supply purchasing and management policy and practice.
- Physician supply utilization habits have not been directly addressed. Price efficiencies have been addressed mainly through supplier contracts and some product standardization. There is a perception that putting limitations on physicians for supply preference will contribute to difficulties in recruiting and retaining medical staffing in Sudbury.
- Staffing issues

  - With the merger, the department experienced high staff movement, bumping, and retraining time and costs.
  - A number of retirements are anticipated in the next two years.
  - Sick time is not a major issue. Attendance awareness program has helped. Overtime and sick time have decreased by about 50% in last twelve months.

- Supply item costs increases due to:

  - Cost of individual supply items have increased over time, but contract management has reduced the impact
  - Hospital has increased the number of procedures that require high-cost items
  - Hospital has started to do procedures that require more technologically expensive items

- There are sharp increases in supply requests before holidays and long weekends, OR shutdowns at March Break and Christmas. The increase in procedure volumes before shutdowns forces the Materials Management staff to increase time spent on nights and weekends to increase pick lines to manage the peaks.

- Department is charged for other items:

  - All transportation and shipping
  - Cylinder gas charges
  - All courier and mailing costs ($120,000)
  - Printing costs and photocopies
  - Print shop (all costs charged out to departments)

- The Department recovers the following expenses:

  - $30,000 postage (Cancer Centre)
  - $30,000 (Cancer Centre)
  - $150,000 print shops – internal full recovery
  - Linen (Cancer Centre, and LTC unit)

- The department uses minimal technology. All audits are manual (for inventory, cycle counts); hand-held technology could help streamline processes. Purchases are done through paper orders and not electronically.

RECENT INITIATIVES

- The department has moved forward quickly over the last two years to implement industry standards and procedures for materials management which were absent or inconsistent in the legacy hospitals.

- Implemented new inventory controls, including minimum/maximum and reorder points, rather than having units/end users order when run out of stock items.

- Adopted industry standards for pick times, delivery, and turn-around times.

- Implemented requisition system for users through Meditech, rather than user ordering direct from supplier.
- Reduced inventory from $1.3 million to $700,000 in 2001/02. Cleaned out and organized carts on units, with $70,000 of items returned to vendors or inventory (and credited the units).
- Each Materials Management staff member is responsible for a 'line'/portfolio, so they have a good understanding of the product mix, suppliers, clients for that line.
- Established formal contracts for suppliers, with exclusivity and reduced costs.
- Consolidated all inventory and processes to enable transfer to new single site.
- Increased visibility of Materials Management supervisors on units, and enhanced availability to end users.
- Product standardization committee has been in place for the last 18 months, but its work has not led to significant savings. True savings have been achieved through actively getting users to select single items where there had been multiple similar items in stock.

RECOMMENDATIONS

202.Reduce staff complement by 4 FTEs ($180,000) in first year (from the 2000/01 levels), and another 4 FTEs ($180,000) post single site consolidation, through:

- Improved staff productivity;
- Use of Electronic Data Interchange through Meditech to send purchase orders to vendors (link with Carenet); and
- Investment in handheld inventory technology through Meditech.

203.Continue efforts towards hospital supply cost reduction ($125,000 per year), through:

- Product standardization;
- Utilization studies for use of medical/surgical supply items; and
- Contract management.

204.Investigate opportunities for participating in a group purchasing arrangement with other hospitals to reduce supply costs through volume discounts, and increase purchasing power. This may be especially beneficial given the HRSRH's geography.

205.There are significant opportunities to standardize/reduce drug purchases as addressed in the Pharmacy section.

REGISTRATION

DEPARTMENTAL OVERVIEW

- Registration at HRSRH is mostly centralized: all inpatients and outpatients (except for outpatient diagnostics and allied health services) register at the same registration desk
- Only Same Day Surgery and pre-admission clinic patients at the Memorial site register at their respective departments.
- The ADT system is fully implemented but it is not interfaced with the OR. A new OR system that is interfaced with ADT will be implemented in April 2003.

BENCHMARKING ANALYSIS

- Expenses have been stable over the last four years. FTEs have also stabilized around 32-34.
- The department cost per weighted case is $24.43 which is just under the cohort 75th percentile.

Exhibit 90: Registration Trends in Expenses and Activity (1997/98 to 2001/02)

	1997/98	1998/99	1999/2000	2000/01	2001/02 *
Total Expenses	$ 1,421,512	$ 1,537,812	$ 1,443,608	$ 1,476,431	$ 1,266,336
% Change		8.2%	-6.1%	2.3%	-14.2%
Compensation Expenses	$ 1,349,538	$ 1,459,282	$ 1,358,002	$ 1,409,319	$ 1,204,299
% Change		8.1%	-6.9%	3.8%	-14.5%
FTEs	32.9	34.1	34.2	32.3	28.2
% Change		3.5%	0.3%	-5.6%	-12.7%
Compensation per FTE	$ 41,032	$ 42,850	$ 39,749	$ 43,688	$ 42,749
% Change		4.4%	-7.2%	9.9%	-2.1%
Total Weighted Cases	38,742	39,238	37,730	37,458	37,458
% Change		1.3%	-3.8%	-0.7%	0.0%
Separations per FTE	1,178	1,152	1,104	1,161	1,330
Dept Cost per Wtd Case	$ 36.69	$ 39.19	$ 38.26	$ 39.42	$ 33.81

** 2001/02 is annualized based on first three quarters of data*

***2001/02 weighted cases estimated as 2000/01 weighted cases*

Benchmark Cost per Weighted Case (excludes certain expenses)

HRSRH	$	24.43
25th Percentile	$	12.33
Median	$	18.66
75th Percentile	$	24.48

Potential Savings at 25th Percentile	$	453,117
Potential Savings % of Total Expenses:		49.5%

ISSUES

- Functional program articulates a fully decentralized system, which usually costs more because it requires more clerks to staff.
- Recruitment and retention: Turnover has decreased. Staff often moves to ward clerk or health records positions.
- Absenteeism, sick time and overtime are not issues.

RECENT INITIATIVES

- Examining potential for further decentralization of registration – reviewed systems in two fully decentralized hospitals.
- Reduced FTEs at Laurentian in 2001/01.

RECOMMENDATIONS

206.Reduction of FTEs by 50% (by 16 FTEs) following move to single site. Half the reduction (8 FTEs) will be decentralized to outpatient areas. The other 8 FTEs will be reduced permanently. (Net HRSRH Savings=$350,000)

207.Develop feasibility studies for implementation of technology for the management of patient registration. This may include:

- New card embossers;
- Bar-coding; and
- Health card validation system (investment=$5000).

- The above will:
  - Improve the ability to determine off-service patients and the appropriateness of patient location;
  - Ensure completeness of demographic information;
  - Streamline and expedite the registration process; and
  - Facilitate decentralized registration.

10. SUMMARY OF RECOMMENDATIONS

GOVERNANCE REVIEW

MAINTAIN THE EXISTING BOARD

1. The HRSRH Board should be maintained as currently constituted; it should not be removed. The Board's skills as a Board and as individual Directors should be supplemented by implementing the further recommendations of this Report.

2. The Board should also be held accountable for ensuring that the Recovery Plan is successfully implemented in order to alleviate the current fiscal deficit. The long term ability of this Board to govern HRSRH should be measured by their ability to monitor the activities identified in the Recovery Plan, and as a result, seeing an improvement in the hospital's financial position.

IMPROVING THE BOARD'S GOVERNANCE CAPABILITIES

3. The Board should implement the recommendations from the HayGroup Report, listed above, with respect to the quality and diversity of information presented to the Board. Options and alternatives should be presented by management to the Board in regular course, and the options/alternatives should include the impact of each such option on the hospital's circumstances.

4. The Board should ensure that the information presented to it allows it to focus on the problems before it. Material should be summarized and highlighted for easier review. Information must be presented in the context of earlier-stated expectations.

5. Benchmarking information should be presented to enable the Board to evaluate the performance of HRSRH against other similarly situated hospitals.

6. A Coach with a strongly defined mandate, as set out in the report, should be appointed with the primary purpose of improving the Board's governance capabilities.

7. The Coach should assume a strong role in ensuring that the Board fulfills the critical requirements related to oversight of the Recovery Plan process, and will be required to report on a regular basis to

the MoHLTC. In the event that the Coach determines that the Board and HRSRH management are unable to successfully implement the Recovery Plan, he/she may recommend that the MoHLTC consider the appointment of a Supervisor as has occurred in other organizations.

8. The Coach must be an individual with a strong governance background and demonstrated leadership skills, preferably with experience in serving as a Chair of a multi-site hospital board.

9. HRSRH should continue to develop its orientation program, with the assistance of the Coach and, ideally, input from the MoHLTC.

10. The Board orientation process should be mandatory for all new Board members.

11. An ongoing Board development program should be established on an annual basis, based on the strategic direction and yearly goals and objectives.

ACCOUNTABILITY

12. The Coach should ensure the establishment of an independent audit committee with terms of reference consistent with the recommendations of the Saucier and Broadbent Reports.

13. The Coach should build on the high degree of commitment demonstrated by the current Board and should develop an increasing awareness on the part of the Directors as to their fiduciary responsibilities.

QUALITY OF CARE

14. Quality of care must become an immediate priority for the Board. Recent plans to address this issue are recognized; however, along with many other issues confronting the Board, established processes must be developed and followed.

15. Quality of care must become an immediate priority for the Board. Recent plans to address this issue are recognized; however, along with many other issues confronting the Board, established processes must be developed and followed.

16. A balanced scorecard approach to performance measurement should be implemented by June 2003.

17. A Quality Committee of the Board should be immediately established, with terms of reference approved by the Coach, and should provide written and verbal reports on progress and issues at every

Board meeting. During the recovery plan period, the Senior Management Team is to ensure performance measurement and departmental indicators are based on best practices.

18. The Board should build on the comprehensive clinical and financial benchmarking analysis conducted as part of this review and should evaluate hospital performance in relation to similar organizations on an ongoing basis.

19. The Board should consider re-instituting the Joint Conference Committee, with representation from administration, the Board and all health care professionals at the hospital, to ensure open lines of communication.

CREDENTIALING

20. Board members should assume an increasingly active role in overseeing credentialing processes. The consultants endorse the Pointer & Orlikoff approach to board involvement in credentialing.

21. The Board should update the professional staff portion of its By-laws to incorporate a credentialing process for extended class nurses and actively explore utilizing extended class nurses to relieve pressures on the physicians.

FINANCIAL RESPONSIBILITY

22. Board members must fully understand and accept their fiscal responsibilities. There is a critical need to establish financial indicators and standards by which the Board can measure and monitor the hospital's fiscal performance. The Coach should assume an assertive role in ensuring that these indicators are identified and monitored appropriately.

23. The Board must monitor uncontrolled spending and/or growth and assume a more proactive stance in providing senior management with direction in the event this continues to occur. The independent Audit Committee recommended previously is critical to this monitoring role. The Coach should also evaluate the ability of the Board to perform this critical function.

24. The Board should establish a philosophy that renders management and the organization fully accountable for managing within the envelope of funds entrusted to the organization. Utilization should be carefully tracked at all levels.

25. The Board should direct management to develop and maintain a comprehensive Recovery Plan in collaboration with the MoHLTC and the consultants, based on the recommendations from the Operational Review. This Recovery Plan should be approved and monitored by the Board and the MoHLTC on a frequent, regular basis.

26. The Board should prioritize the services that the hospital provides to the catchment area, taking into account demand for services, acuity of service, and availability of services elsewhere in the Province, as a tool to assist with service reductions, if required.

COMMUNICATION WITH THE MOHLTC

27. The Board should direct management to seek clarification on the appropriate contact officials at the MoHLTC and to initiate a process for improving ongoing HRSRH/MoHLTC communication. With respect to operational issues, the Regional office will be the primary contact.

28. HRSRH must identify the appropriate mechanisms for monitoring the implementation of the Recovery Plan. The Board should agree with the MoHLTC on the key metrics that will be used to evaluate the implementation and report these accurately and on a timely basis to the MoHLTC.

29. The consultants strongly support the stated intention of the current Government to move towards a multi year approach to budgeting and funding, which will allow better planning and enable increased accountability within the hospital sector.

BOARD RELATIONSHIP WITH SENIOR MANAGEMENT AND THE CEO

30. To facilitate the Board's accountability for organizational direction and performance, greater emphasis should be placed on ensuring that key decisions are made after full consideration of decision options and comprehensive analysis. To this end, the Board should direct management (represented by the CEO) to articulate options and provide supporting analysis to these options.

31. The Board and management should continue to improve reporting requirements and mechanisms. In the short to medium term, the Board may require more detailed information to allow them to appropriately oversee rigorous adherence to the Recovery Plan. The Coach should assist the Board in creating an appropriate information flow between management and the Board.

32. Board members should continue to develop their abilities to sensitively question management.

33. The Board should address issues associated with the ability to attract and retain senior managers who possess the skill sets that will be required to successfully implement recommendations associated with the Recovery Plan. It is recognized that the Board is only directly responsible for the CEO and the Chief of Staff; however, the Board should oversee the recruitment of senior managers who possess the appropriate requirements during the period of time in which the Recovery Plan is being implemented.

POLICY DEVELOPMENT

34. The Board should evaluate the key competencies and requirements for both the CEO and the Chief of Staff, and direct the CEO to evaluate the current structure of senior management with a view to evaluating the suitability of those currently in senior roles. The CEO should provide a report to the Board by January 2003.

35. The Board should continue to develop best practice policies, with attention being paid in the short term to addressing the lack of policies pertaining to Board solidarity and authority to speak on behalf of the corporation.

BOARD COMPOSITION AND STRUCTURE

36. The Board should revise the current in camera policy, with a view to limiting the amount of time spent in camera to those issues, which do indeed require confidential discussion. The Human Resources Committee should be eliminated.

37. The Board should examine its committee structure and determine if the roles and responsibilities of certain standing committees could be merged, thus potentially reducing the required commitments of volunteers.

38. The Human Resources Committee should be eliminated.

39. The Nominating Committee should assume a more assertive role in identifying and recruiting individuals who possess the required skill sets to improve Board functioning and decision-making. As well, the Nominating Committee should consider the attendance record of Board members when

considering re-election to the Board. The Committee should also assume an expanded governance role to ensure appropriate orientation, continuing education and evaluation of the Board.

60. The Executive Committee should be given the mandate to make decisions on behalf of the full Board only in matters of administrative urgency throughout the year.

BOARD PROCESSES AND DECISION MAKING

61. The Board Chair should encourage more active participation on the part of all Board members in discussion and decision making. He/She should provide feedback to Board members as to their effectiveness and should assist them in developing strategies to foster their productive involvement. The Coach should assist in this process, and should consider developing an evaluation tool and process to determine the effectiveness of Board meetings.

BOARD INVOLVEMENT IN THE CAPITAL PROJECT

62. The Board should continue to build on recent improvements with respect to reporting processes and ongoing vigilant monitoring related to the capital project.

63. The Board must recognize and objectively consider the implications of the significant financial overruns associated with the capital project. The ability of the community to meet its financial commitment is seriously in question, depending upon the option selected for moving forward with the construction.

64. Depending upon the degree of construction required in Phase 2 of the capital project, the Board should provide management with specific direction as to the need for a shadow team to oversee all aspects of construction under the direction of the current Construction Project Director.

MANAGEMENT AND ORGANIZATION

STRUCTURE

65. Conduct an evaluation of the current program management structure, to ensure that community and patient needs are best met by the existing program clusters.

16) Revise the Senior Management structure and roles to ensure a more equitable distribution of HRSRH programs and departments. The new structure should emphasize the strategic role of the Vice Presidents.

17) Create a new position responsible for leading quality initiatives and risk management. While this position is not a Vice Presidential role, it should be the senior level that reports directly to the President and CEO.

18) Consider the feasibility of creating a Chief Operating Officer (COO) role. Given the increasing size and evolving role of HRSRH, there may be a requirement for a COO to assume greater responsibility for operating issues, allowing the CEO to focus to an even greater degree on the strategic issues of the future. In particular, the CEO may be required to actively explore other financing models in order to complete the capital project.

19) Re-evaluate the role of Vice President, Communications and Government Relations on the Senior Management team, with a view to restructuring the position to that of an advisor to senior leaders.

DECISION MAKING AND ACCOUNTABILITY

20) Re-examine current expectations and requirements of the Senior Management team related to decision making and accountability. Review current position descriptions and revise where necessary. Concurrently, review current middle level management with a view to increasing the level of accountability of Directors.

21) Ensure that all levels of management are given the mandate/authority to make the appropriate level of decisions, at the right time, and be held accountable for those decisions. HRSRH may wish to implement a leadership educational program to further develop the skills and abilities of its management team.

22) The organization as a whole, and in particular, the Vice Presidents need to be vigilant in proactively dealing with complex situations which require their intervention. An example of such a situation includes working with physician leaders to address the utilization of hospital resources and staff.

23) The Senior Management team needs to prioritize its initiatives and create implementation plans that outline responsibility for the initiatives, timelines, and measures for completion. The team may wish to develop a structured process to ensure that these decisions are made, then to regularly [illegible]

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CAPACITY TO IMPLEMENT CHANGE

60. The CEO should immediately evaluate the skill mix and capacity of the full Senior Management team to implement the fundamental changes that will be required to respond to the findings of the Operational Review and to successfully complete the capital project. As suggested in Chapter 4, the CEO should report her findings to the Board in January 2003.

61. Establish a yearly "calendar" which identifies key requirements with specific timelines for such items as budget development, Operating Plan submission, annual general meetings etc. The agenda of Senior Management meetings should be tailored to ensure that these matters are addressed in a timely fashion, and that adequate time is devoted to a full and complete process.

62. Develop a list of all recommendations from the Operational Review and establish a timeline for implementing the required changes. Individuals should be identified as being primarily responsible for each initiative, and the list should be reviewed on a monthly basis with a view to monitoring ongoing progress.

63. HR/OD should develop and implement an education program aimed at enhancing the administrative and leadership skill sets of Managers, Directors and Vice Presidents.

MEDICAL STAFF REVIEW

64. Administration should continue to collaborate with physicians to ensure that decision making processes are inclusive and consistent across programs.

65. There are efficiencies to be garnered by the hospital through a strong commitment by the administration and medical staff to implement utilization management strategies. A significant degree of work needs to be accomplished in the area of utilization management.

66. Effective organizations ensure that benchmarked clinical utilization data is shared with programs and physicians on a quarterly basis. As well, this information serves as part of the credentialing process.

67. Assess the efficacy of the hospitalists and admissionists on an ongoing basis and report on a regular basis to the MAC. Develop clear standards and criteria for ongoing evaluation of these roles. In particular, review the role of admissionists in the Emergency Department.

68. Emergency Department staff should monitor the impact of lack of general medicine coverage on the provision of care in the department. Once data has been collected and analyzed, the findings should be shared with the MAC and then communicated appropriately beyond the MAC to senior management and the Board if necessary. Findings should be incorporated into the medical human resource plan. This plan is discussed below under the Recruitment and Retention section.

69. Hire case managers to help address the fragmentation of care provided to patients. Case managers would oversee the delivery of patient care while working collaboratively with the clinical staff to ensure appropriate planning and use of resources.

70. Implement care maps which are based on best practices and nationally recognized standards of practice. Efforts should include educating the staff and monitoring the application of care maps.

Specific strategies are listed below:

- Clearly define who is responsible for overseeing physician utilization patterns and develop mechanisms to report on such.
- Implement an effective date of discharge program.
- Obtain physician buy in to improve utilization.
- Educate the medical staff with respect to the importance of documentation and the resulting impact on the LOS, EDD, CMG, RIW and hospital funding.
- Review mandate of the Utilization Management Committee and ensure that the Chair also sits on MAC and provides regular written reports.
- In collaboration with medical staff, establish a strong definition of ALC and ensure that this is well understood and implemented.
- Further detailed recommendations relating to effective hospital utilization management care are discussed in Chapter 9.

PRESSURES ON PROVISION OF MEDICAL CARE

71. Develop a comprehensive medical human resources plan, which is congruent with the organization's strategic directions. Ensure that recruitment efforts are strategic, and are based on the required needs of the populations served as well as the hospital's mandate to fulfill its defined role.

RECRUITMENT AND RETENTION

72. Restructure the medical leadership as follows:

- Chiefs of Departments report to the Chief of Staff with respect to medical quality and credentialing.
- Create a position of Vice-President of Medical Affairs who reports directly to the CEO. This individual will act as a link between the Administration in matters of recruitment, medical quality assurance and credentialing of medical staff, e.g. impact analysis.
- Vice-President of Medical Affairs may have direct reporting responsibility for Programs or Services.
- Medical Program Directors report to Administration (e.g. Vice President of Medical Affairs and the Vice President, Clinical Programs).
- Reconfigure MAC with a view to reducing its size and review its mandate.
- The Medical Program Directors or a representative should be a fully participating member of MAC.
- Improve the efficacy of MAC reporting to the Board. Discontinue practice of attaching a full set of MAC minutes to the Board package, and provide the Board with a summary of motions passed at MAC. As well, any relevant issues/points of discussion should be highlighted for the Board's review.
- Review the number of service Chiefs which currently are in place. A reduction in their number may improve the overall accountability of the Chief and Program Director.
- Continue to clearly re-articulate the Medical Program Director and Chief of Department roles.

CAPITAL PROJECT REVIEW

CAPITAL PROJECT PROCESSES

73. Regardless of the option implemented, several changes to the approach are assumed:

- The future bed count will be lower than that currently planned as a result of the utilization improvements to be made – adjustments to all programs, services and departments will be assessed critically and the necessary planning and design adjustments made (functional needs, facilities required and the approach to implementation);
- Ongoing reviews will be carried out to find as many ways as possible to reduce the project scope for equal or better functional, and operational and capital value;
- Improved capital project control and monitoring systems will be put in place and adhered to in order to reduce the risk of incurring unanticipated additional capital costs and requiring that all project team members fulfill their required professional roles and mandates;
- The Ministry of Health and Long Term Care will be prompt and forthcoming in its project reviews, minimizing the impact on project schedule; and

- The Board will be kept fully informed and will fulfill its duty in ensuring that capital and scope control is maintained, according to its fiduciary responsibility.

74. The hospital may also wish to consider conducting a detailed review of all contracts related to the capital project.

CAPITAL PROJECT COMPLETION

While the net present value sensitivity analysis conducted in the preceding section showed option 4A1.2 as the lowest cost option, the difference between it and Option 2 is not very large, ranging from $2.5 to $8.6 million. At the mid-line (most likely) scenario for cost escalation and cost of capital, Option 2 is only $3.6 million (or 2.4%) more expensive than Option 4A1.2. The value of that difference should be considered in conjunction with the non-financial evaluation criteria describe earlier in the chapter.

The non-financial advantages of Option 2 are as follows:

- allows for the capital project to be complete a year earlier than 4A1.2;
- meets the expectations of the community, staff and physicians by retaining on one site all programs and services currently provided by HRSRH; and
- is congruent with the publicly stated position of the MoHLTC and with the HSRC directives on the service profile of HRSRH.

The non-financial advantages of Option 4A1.2 are as follows:

- allows an additional year for the raising of the required capital; and
- allows for the provision of mental health and complex continuing care services within the more congruent context of specialized organizations and delivery systems; and
- allows HRSRH to focus on its role as a tertiary referral centre providing high quality acute and rehabilitation care.

75. The MoHLTC and HRSRH should work to quickly determine the budget available for completing the HRSRH capital project, including MoHLTC funding, community share, and other potential sources of financing.

76. As part of the recovery planning process currently underway, and assuming that sources of funding have been identified, the MoHLTC and HRSRH should select from Options 2, 4A1, 4A2 and 4A3.1. Any plan to complete the project in two phases as in option 4A3.2, should not be considered.

77. As long as a detailed financing plan for the completion of the capital project is not available, HRSRH and MoHLTC should base the recovery plan on the continued operation of three sites.

78. At the time of the review the HRSRH has a cash flow monitoring model that is updated daily by the finance staff. Given the current state of the cash position and the anticipated direction of the cash balance, the senior management team should review the model at each meeting. Variances from the forecast should be immediately brought to the attention of senior management so that decisions may be made regarding HRSRH operations and obligations to staff, suppliers and patients.

79. The current banking arrangement provides for a $15.0 million line of credit. The cash flow projections to the end of the fiscal year contemplate a $90 million cash flow deficit. The ability of the hospital to obtain additional financing from the bank may be limited given the current and projected financial position. The recovery plan process should detail how the MoHLTC and the HRSRH will work together to bridge the short-term cash shortfalls until the implementation of the recovery plan can bring projected expenses and revenues back in line.

80. Activity based reporting must become part of the monthly financial reporting package as quickly as possible so Managers can be held accountable for the departmental financial results relative to the amount of care they are providing. All activity based and financial reporting should be reviewed by the Board prior to submission to the MoHLTC.

81. Once implemented, workload measurements must become part of the monthly financial reporting package.

82. A more formal process for Directors to review their individual results with their Vice Presidents needs to be developed, communicated and implemented. This focus by the Vice President will ensure variances are identified and clear, concise action plans are developed to address the variances.

83. Each Vice President should provide to the CEO and CFO on a monthly basis a formal written report summarizing highlights for the month (financial or otherwise) with detailed action plans for the month as well as follow up on the prior month action plans for their respective departments.

84. Activity based information must be incorporated into the budgeting process and communicated so that Managers and Directors clearly understand what is expected of them and their departments.

85. Senior management needs to develop and implement a performance measurement system for all staff, which ensures that all areas and actions that require improvement in the hospital are being identified, communicated and followed up on in a timely basis.

86. Investigate/evaluate current chart documentation policies and procedures and create a documentation improvement-working group to assist in evaluating current documentation practices, with a goal to improving standards. To ensure that all stakeholders are represented, this group should have representation from the Clinical Programs, including physicians, Decision Support, and Health Records, with a Senior Management sponsor.

DETAILED FINANCIAL ANALYSIS

OPPORTUNITIES FOR IMPROVEMENTS IN OPERATIONAL EFFICIENCY

IMPROVEMENT OF CLINICAL DATA QUALITY

87. Develop Coding Guidelines

    - With support provided by the Documentation Improvement Working Group, the Health Records Department should lead the development of Coding Guidelines for high volume/ resource consumption cases.
    - These guidelines should be developed with the management and the healthcare providers of the Clinical Programs and members of the Health Records Team, including coding technicians. These guidelines should be institution/program-specific and in accordance with CIHI guidelines.

88. Health Records Technician Chart Review: the review team recommends that the Health Record coding staff read the entire chart to ensure all procedures and co-morbidities are captured and reported accordingly. As this may effect the turnaround time of month-end submission, based on current staffing, the department should conduct an impact analysis of this enhanced procedure.

89. Monthly Data Quality Review: the Health Records Department should institute a Monthly Data Quality Review process before the submission of month-end. This should be conducted by a Health Records Administrator (HRA) or the Supervisor of the Coding Section.

    - Components of this monthly review should include the monitoring of:
        - complexity volumes by program;
        - RIW/OCW assignment by program;

  - errors/corrections by technician;
  - MNRH, ALC days and atypical cases; and
  - Day Surgery compliance rates.
- Spot chart audits should be conducted to support data quality.

90. Health Records Staff Education: Based on the coding assessment in this review, the Health Records coding staff requires additional in-depth knowledge and understanding of CMG grouping methodology, including Complexity/Age Overlay. Furthermore, we recommend that the Health Records Department develop an education plan to ensure all coding staff is abreast of changing methodologies. This plan can include self-testing and evaluation, and attendance at CIHI regional sessions, as well as attendance at Grand Rounds and regional Coding Quality Improvement Workshops.

91. The Health Records department should develop an in-service program involving physicians from the Clinical Programs. Physicians from the Clinical Programs can provide insight to high volume/high resource procedures/case mix groups to allow for better data collection.

92. Continued Education for Physicians: the Health Records department and the Senior Management Team should develop a concise and customized Physician Education Program. Demonstrations should include the effect of improved documentation, including co-morbidities post-admit co-morbidities, and the corresponding effect on Case Mix Group complexity, RIW and expected length of stay. These sessions should be provided with the support of the Finance department and at the convenience of the physicians.

IMPROVEMENTS OF MIS DATA QUALITY

93. Develop a multi-disciplinary MIS committee and working group process, with representation from all major disciplines and departments reporting MIS data. The committee and working group should be responsible for reviewing and verifying all statistical and financial data before it is finalized for the Trial Balance submission to the MoHLTC. This process should be followed quarterly for the quarterly submission, and annually for the full-year submission.

94. Review the Trial Balance with respect to the allocation rules of OCDM to ensure that reporting practices are not leading to an inflation in HRSRH's ACPWC.

95. Fast-track the implementation of the GRASP nursing management workload system in all inpatient units (including OR/PACU and Labour and Delivery), and in the major ambulatory care areas (e.g. Emergency, Dialysis, Day Surgery, and Oncology). Develop and implement processes for the regular validation of workload including inter-rater reliability and routine audits.

96. Implement valid workload measurement systems in all other patient care departments including Pharmacy, Respiratory Therapy, Non Invasive Cardiology, and Electrodiagnosis.

97. Use MIS data on a regular basis as part of departmental/cost centre reporting. Include wherever possible, comparator data from other organizations to allow mangers to evaluate the validity and appropriateness of their financial and statistical data.

RETROSPECTIVE UTILIZATION REVIEW

98. Utilization Management / Concurrent Review: HRSRH should implement a Concurrent Review Utilization Management Program. The concurrent review process should be implemented in the medical and surgical programs as soon as possible using objective medical criteria. Hire case managers to help address the fragmentation of care provided to "orphan" patients and to improve overall clinical utilization. Case managers are to oversee and manage the delivery of the care provided while working collaboratively with the clinical staff and the entire healthcare team. Measurement of turnaround time of orders/services tests should be a major component of this program. Ensure an on-going and standard reporting process to clinical teams of compliance to performance standards.

99. Revised Bed Management Process: A task force should be established with representation from each site and relevant programs to review the current Bed Management Guidelines / Policies and Procedures.

100. Discharge Planning Process: High risk screens must be applied consistently in the Emergency Department and Pre-Op Assessment Clinic. Patients must be interviewed within established time frames. A standard of 24 hours after admission should be established for the documentation of a clear treatment / discharge plan by the most responsible Physician or Attending Physician. Based on our chart review, we recommend the Social Worker role and the role of the Patient Flow Manager be evaluated as they relate to the subject of discharge planning. Further, we recommend that these roles have a clear mandate that is both measurable and effective.

101. ALC- Identification / Documentation: Since our review, the hospital has instituted a new ALC definition and form during November 2001. It is imperative that this process be effective in ensuring consistent concurrent identification of patients that become ALC.

102. Investigation/Evaluation Of Current Chart Documentation Policies and Procedures: Create Documentation Improvement Working Group. The quality of documentation at Sudbury Regional Hospital is generally not of good quality. This evaluation was made by CHM Health Records Technicians, CHM Utilization Reviewers and hospital staff. Quality of documentation is directly related to effective utilization and communication as well as the quality of coding.

103. Enhanced Clinical Information Feedback: Information reports must be provided to the Programs / Department Chiefs and physicians every quarter. In a collaborative manner, these reports are to

support decision making and ensure accountability. These reports must have a high degree of analysis in addition to the easy to read formats using graphics and benchmarked against Ontario Expected Length of Stay and Best Practices. These reports must be utilized by the Programs to establish annual utilization targets and improvements and be incorporated into the development of the Program budget. Discussion should take place of identifying physician names on reports as this is the practice of many Ontario hospitals as opposed the current practice of physician numbers. Enhanced Coding Practice / Continuous Physician Education: As identified in the Coding Validity Study section of this report, an Action Plan should be developed into to address the recommendations.

CLINICAL PROGRAMS

CARDIOLOGY AND CARDIO-THORACIC SURGERY

104. Enhanced Coding Practice / Continuous Physician Education: As identified in the Coding Validity Study section of this report, an Action Plan should be developed into to address the recommendations.

105. Adjust staffing for net savings of $705,300.

106. Admit open heart surgery patients on the day of the surgery. Perform all pre-operative work on a pre-admission (outpatient) basis.

107. Reassign 10 inpatient beds on the second floor as holding beds (non inpatient) for cardiac catheterization patients.

108. Develop strict admission and discharge criteria for the Cardiac ICU.

109. Increase allied health resources to the clinical programs through a re-allocation of staff from the centralized departments, include physiotherapists, physiotherapy assistants, occupational therapists, and social workers.

110. Explore the feasibility of implementing remote angiography pre procedure work ups to reduce length of stay and unnecessary admissions.

GENERAL MEDICINE

101. Achieve the cohort average LOS for gastro/hepatobiliary and pulmonary programs, which will lead to a 10.6 bed reduction over a period of one year. Associated savings based on $200 per day nursing unit cost will be $775,625.

102. Aggressively implement Clinical Pathways based on current best practices.

103. Consistently apply a High Risk Screening tool to identify long stay patients.

104. Restructure discharge planning functions and create concurrent utilization roles.

105. Implement strict early morning discharge time with communication to family in advance.

106. Implement Expected Date of Discharge protocol.

107. Permit CCAC staff to document in the patient chart to improve communication regarding placement coordination services.

108. Modify the administrative on call system to ensure that a clinical manager is responding to patient care related issues.

GENERAL SURGERY

109. Adjust staffing on 3RC for net savings of [illegible].

120. Aggressively develop and implement clinical pathways based on best clinical practices.

121. Continue to maximize the number of ambulatory/day surgeries.

122. Explore opportunities to close beds on weekends.

123. Educate physicians in completing face sheet.

124. Perform more endoscopic work in the Endoscopy unit, as opposed to the Operating Room - Mental Health

125. Maintain crisis team to support emergency department at HRSRH and explore best practices in terms of staffing.

126. Explore opportunity to establish a Psychiatric Emergency Department located at the Algoma site for medically cleared patients.

127. Ensure effective collaboration between HRSRH and NEMHC.

NEUROLOGY

128. Aggressively recruit neurologists. HRSRH must recruit more than one neurologist to provide for adequate on-call and backup coverage.

129. Pursue the development of an Alternative Funding Plan for neurologists and neurosurgeons.

130. Establish a day hospital to meet the needs of neurology patients.

131. Develop and implement clinical pathways.

132. Permit CCAC staff to document in the patient chart to improve communication regarding placement coordination services.

133. Dedicate a physiotherapist to the neurology service.

ONCOLOGY

134. Increase ambulance service to HRSRH for transfers, emergencies, and repatriations.

135. Continue to educate physicians regarding coding and documentation practices.

136. Aggressively develop and implement clinical pathways based on current best practices.

137. Attempt to identify barriers to discharge at admission and involve social work as early as possible.

ORTHOPAEDICS

138. Adjust staffing for net savings of [illegible].

139. Reduce 5 beds over a period of one year. Associated savings based on [illegible] per day nursing unit cost will be [illegible].

140. Improve bed management practices to aggressively identify and manage discharge barriers.

141. Limit the number of off service patients admitted to surgical beds.

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158. Continue with efforts with respect to inventory improvement. Will result in savings of $100,000 for Year 1.

159. Improve linkages with the Finance department to ensure that referred-in revenues accurately reflect volumes. Will result in $60,000 additional revenues in Year 1, and $80,000 in Year 2. This should be sustainable throughout the five year plan, and should be increased to $100,000 in Years 4 and 5.

160. Reallocate clerical staff and assign to specific modalities.

161. Review current arrangement with community colleges. The Clinical Instructors who primarily support college students are funded 50% by HRSRH.

162. Upon completion of the single site, there will be significant opportunities to reduce staff (both clerical and technical). As well, the adoption of PACS technology, while requiring a large capital investment will also result in further staff savings. Years 4 and 5 of the Recovery Plan should include a target of $1.5 million in savings assuming that one site is operational.

EMERGENCY SERVICES

163. Patient flow and the patient holding/waiting area related to the triage processes should be re-examined.

164. It is recommended that ongoing meetings, at a senior level, should continue to be held between HRSRH and the Ambulance Service and the District Health Council (DHC) to discuss improved cooperation and develop a plan to address non-urgent and inter-site transfers in a timely fashion.

165. Implement a Bed Management process to support patient focused care. This process places the right patient in the right bed, minimizes internal transfers and reduces waiting time for an in-patient bed. Many high occupancy hospitals have found that utilizing a first available bed policy does not work efficiently.

166. The Utilization Committee should implement processes to review appropriateness of admissions, monitor continued stay and analyze practice variation as well as monitor statistics from all programs including Emergency Services.

167. It is recommended that the Hospital continue to work closely with CCAC to articulate a strategy that will optimize the use of available CCAC resources to accelerate hospital discharges where appropriate and avoid admissions when appropriate.

168. A clear response time policy for consultants (and anyone else providing on-call service to the hospital) should be enforced. The response time policy must clearly establish standards for responding by telephone and time standards for appearing in the Emergency Department. The response time policy must have clear expectations and consequences for violation must be delineated and enforced.

PHARMACY

169. Discontinue pursuit of Pyxis implementation at this time, due to high cost for machines and maintenance ($2.3 million plus maintenance costs).

170. HRSRH should achieve the cohort median drug cost per weighted case of $98 within three years. Achieving that level from the current calculated drug cost per weighted case of $168 would entail a $2.6 million total reduction, or 42% of current drug costs. Recognizing the impact of possible errors made by HRSRH in the proper tracking and reporting of drug rebates and recoveries, and to ensure a more efficiency target, we recommend a total savings of $1.6 million in total drug costs (or 26%) over three years. This would be accomplished as follows:

- Implementing IV to PO (oral) step-down program, resulting in savings of 15% over 3 years;
- Reducing antibiotic usage by 15% over 3 years;
- Continuing efforts to standardize policies and completing a single formulary;
- Reducing non-formulary items, optimizing brand standardization and implementing auto-substitution policies;
- Dedication of a full-time pharmacist to Drug Usage Evaluation, to oversee the process for these efforts, evaluate utilization, and ensure appropriate usage of drugs throughout the hospital.

171. Decrease medication wastage by reducing the number of days of medications sent to units from 7 days to 4 days at the Memorial and SJHC sites.

172. Achieve cohort median Pharmacy department cost per weighted case of $55 within three years ($0.5 million total reduction, or 21% of current costs) by:

- Consolidating IV batching services to Laurentian site with only starter doses prepared in satellites.
- Evaluate cost/benefit of reducing purchasing of pre-mixed IVs and impact on increasing production capacity.

173. Blister pack all oral medication to save technician time from returning medications, expedite the dispensing and returns process, and reduce medication errors. Investment in an upgrade to the Laurentian machine ($1,500) and purchase 20 more auto-feed cassettes ($2,000). This change will also facilitate future use of an automated dispensing system.

174. Elimination of dispensing vials, and change over to zip-lock bags, to complement the use of blister packs and reduce supply costs.

175. Further optimization of role of technicians versus pharmacists to free up pharmacist time to provide clinical pharmacy services.

176. Implementation of pharmacy generated Medication Administration Records, and replacement of the medication tickets system to reduce medication errors, improve efficiencies and provide relevant information for the clinical pharmacist. Assign nurses to the verification of the MARs, in place of time recovered from making medication tickets.

177. Improve turnaround time for medications through use of a portering service and pneumatic tube system post single site. Also implement a predefined medication order entry system to improve medication turnaround and reduce errors.

178. Implement process to reduce medication incidents and improve quality of care through:

- Staggered shifts for Pharmacists to extend coverage into the evenings
- Influence orders to be written and processed at the ward level, as more time is made available to increase clinical pharmacy services.

179. Take back management control of off-site inventory and centralized purchasing. Dedicate technicians to ward-stock management on units. Develop rigorous procedures to monitor all ward-stock issues and follow-up unusual usage patterns by units.

180. Develop and implement a workload measurement system for dispensary and clinical activities.

RENAL DIALYSIS

181. Continue shift of skill mix towards 7:3 RN/RPN ratio. Target savings within 3 years is $250,000

182. Pursue efforts to recruit Endocrinologist to address increasing utilization of dialysis services.

183. Investigate implementation of radiology technology to monitor access clots.

RESPIRATORY THERAPY

184. Reduce staffing complement by 3 FTEs over three years (Savings=$165,000) through:

- Use of aides or modified workers
- Increased productivity

185. Improve collection of workload and statistics to evaluate improvements in productivity and outcomes.

186. Explore additional revenue generation opportunities while maintaining appropriate staffing levels for required services ($50,000).

ADMINISTRATION AND SUPPORT DEPARTMENTS

BIO-MEDICAL ENGINEERING

187. Elimination of Service Master Agreement. Annual cost of $440,000, only around 50% recovered ($200,000 savings):

- Although the program may be economically advantageous for the hospital in the long run (post warranty period expiry for the covered instruments), it is very costly to maintain given the hospital's current financial situation. A re-examination of the cost-benefit of the program is recommended once the hospital has achieved a healthy fiscal position.
- Very few instruments require less than 24 hours service time.
- For life support equipment, develop emergency repair protocol using in-house staff.

188. Reduce staff complement (from its 2000/01 levels) by 4 FTEs ($230,000) in first year and by another 4 FTEs through attrition over the next five years. This will bring department expenses closer towards the cohort median.

CENTRAL PROCESSING

189. Re-examine the option of consolidating all central processing services at one site prior to the overall hospital move to the new facility.

190. Reduce staff complement by 4 FTEs immediately (Savings=$180,000), another 4 FTEs post single site consolidation (Savings=$180,000) through:

- Increased productivity;
- OR information system implementation for ordering;
- Reduction in portering between sites;
- Streamlined processes;
- Multi-skilled workers and cross-training;
- Continued implementation of standardized/generic pick trays and more homogeneous physician preference lists.

FOOD SERVICES

191. Pre-single site – target total cost reduction of $900,000:

- Elimination of $400,000 of retail food losses by either contracting out all non-patient food services – this would entail a reduction of $1.8 million in non-patient food expenses (labour, supplies, and equipment) – or another strategy that would achieve a break-even point in retail food operations.
- Reduction of $500,000 in patient food costs by achieving the median cohort food cost per day of $11.40 through improved volume purchasing agreements, brand standardization, and implementation of system for tracking and invoicing all tray and bulk food deliveries to the nursing units and other departments.

192. Post single site, total additional target cost reduction of $560,000 over two years:

- Reduce transportation cost by $160,000.
- A reduction of $400,000 in compensation costs to achieve the median cohort compensation per day of $16.75 (vs. $18.87 currently). This would be achieved through improved productivities following the consolidation of food services.

HEALTH RECORDS

193. Management reports productivity targets set for coding are not being met and can be achieved. (Equivalent to savings of $90,000)

194. Review transcription practices. Review current practice of the number of types of transcribed documents (Equivalent to savings of $135,000).

195. Savings opportunity appears to exist with departmental workflow analysis & redesign. (Equivalent to savings of $135,000) The department should review the transcription services productivity and undertake a review to examine outsourcing opportunities.

HOUSEKEEPING

196. Examine transferring all mail delivery function to mail/transportation (Equivalent to savings of $45,000)

197. The department should review the transcription services productivity and undertake a review to examine outsourcing opportunities.

198. Examine opportunities for increasing the ratio of supervisor to staff. The department should then:.

INFORMATION SYSTEMS

199. Productivity improvements: increase labour productivity in order to achieve 25th percentile benchmark performance yielding a total savings of $340,000 over two years (net of the additional investment in supervisory resources).

200. Opportunity to renegotiate NEON contract in 2003, to ensure fair distribution of voting shares. Goal to reduce downtime and work due to delays in Meditech modifications (Savings=$100,000 over two years).

MATERIALS MANAGEMENT

201. Review and optimize computer equipment and software purchasing practices to (Savings=$50,000).

202. Reduce staff complement by 4 FTEs ($180,000) in first year (from the 2000/01 levels), and another 4 FTEs ($180,000) post single site consolidation, through:

203. Continue efforts towards hospital supply cost reduction ($125,000 per year), through:

204. Investigate opportunities for participating in a group purchasing arrangement with other hospitals to reduce supply costs through volume discounts, and increase purchasing power. This may be especially beneficial given the HRSRH's geography.

205. 206. There are significant opportunities to standardize/reduce drug purchases as addressed in the Pharmacy section.

206. Reduction of FTEs by 50% (by 16 FTEs) following move to single site. Half the reduction (8 FTEs) will be decentralized to outpatient areas. The other 8 FTEs will be reduced permanently. (Net HRSRH Savings=$350,000)

207. Develop feasibility studies for implementation of technology for the management of patient registration. This may include:

208. Develop feasibility studies for implementation of technology for the management of patient registration.

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CANADIAN HEALTHCARE MANAGEMENT INC.

Operational Review of Hôpital régional de Sudbury Regional Hospital

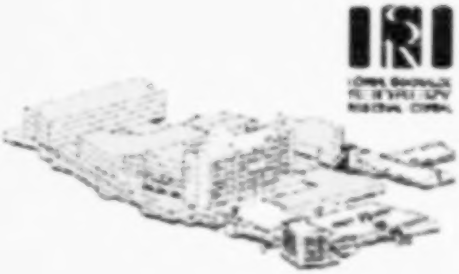
CONFIDENTIAL FINAL REPORT

APPENDICES

November 1, 2002

Ontario

Ministry of
Health and Long-Term Care



Appendix I:
Steering Committee and Working Group Membership

Steering Committee
Chair
Jean-Paul Aubé

MoHLTC
Gail Ure, Executive Director, Health Care Programs
Allison Stuart, Director, Hospital Programs
Peter Armstrong, Regional Director, Northern (Sudbury) Branch
Meryl Hodnett, Team Leader, Health Restructuring Implementation Team (HRIT)
William Bailey, Director (A), Capital Services Branch
Murray Glendinning, Financial Expertise
Elaine Bishop, Program Consultant, Hospital Programs

HRSRH
Tom Quenney, Board Chair
Patrician Buchanan, Board Treasurer
Vicki Kaminski, President and CEO
Dr. David Boyle, Chief of Staff
David McNeil, Vice President and Chief Nursing Officer
Karen Bota, Acting Chief Financial Officer
Ben Petersen, Chief Financial Officer

MoHLTC Observers on Steering Committee and Working Group Members
Rick Cooper, Manager, Finance & Information
Ann Matte, Program Manager (a)
Martha Auchinleck, Financial & Information Coordinator
Andrew Irving, Information Management Analyst
Bruce Villella, Hospital Consultant
Mila Peters, Consultant, HRIT
Meryl Hodnett, Consultant, HRIT
Joe Nazareth, Planning Consultant

Clinical Working Group (HRSRH Memvers)
Lucille Perrault, Surgical/Quality Department
Dr. Abourbih, Surgical Department
Grace St Jean, Critical Care/Emergency Department
Marie Church, Medicine/Mental Health Department
David McNeil, VP Clinical Program Department
Dr. Wayne Lambert
Lise Dion, Medical Records Department
Richard Joly, CCAC
Sandra Duhamel, Decision Support Department
Louis Andrighetti, Continuing Care Rehab Department

Angelo Mazzuchin, Clinical Diagnostics Department

Financial Working Group (HRSRH Members)
Karen Bota
Sandra Duhamel, Decision Support
David McNeil, VP Clinical Programs
Aurel Malo
Paul St George
Ken Gardie

MoHLTC
Rick Cooper, Manager, Finance & Information
Ann Marie, Program Manager (a)
Martha Auchinleck, Financial & Information Coordinator
Andrew Irving, Information Management Analyst
Bruce Villella, Hospital Consultant

Capital Planning Working Group (HRSRH Members)
David McNeil, VP Clinical Programs
Derek Beckley
Helyar and Associates
Pat Tessier
Blaine Nicholls
Louis Belanger
Brian Hein, PCL
Agnew Peckham Resource
Karen Bota

APPENDIX II: MARKET SHARE FOR TERTIARY PROGRAMS

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Appendix B: Market Share for Tertiary Programs

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Appendix III Board Survey Results

	Question	Number of Scores 1 no	 2	 3	 4	 5 yes	Board Average
A.	STAKEHOLDERS AND MEMBERS						
1.	The Hospital's mission and core values speak of accountability to its stakeholders, and specifically to the patient and to the taxpayer. Does the board's responsibility to provide health care services to the community take priority over the board's responsibility for fiscal accountability?	0	6	2	8.5	9.5	3.8
2.	Do the following regularly attend board meetings (as observers):						
	a) members of the public?	11	6	1	4	4	2.4
	b) Hospital employees?	8	8	0	3	7	2.7
	c) members of the media?	0	2	1	7	16	4.4
3.	Does your board and the Hospital generally have the support of the community?	0	0	2	17	7	4.2
4.	Does the local media support the Hospital and recognize its challenges?	0	0	1	18	7	4.2
5.	Does the Ministry of Health and Long-Term Care send clear and consistent messages to the Hospital with respect to the Ministry's expectations of the Hospital?	8	11	2	4	1	2.2
6.	Does the Ministry of Health and Long-Term Care provide timely feedback to the Hospital?	14	9	2	0	1	1.6
7.	Does the Hospital advertise for new corporate members on an annual basis?	2	1	3	4	16	4.2

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
8.	Would you describe the relationship between the Hospital and its foundation as open and cooperative?	0	5	1	7	13	4.1
9.	Does the foundation share the Hospital's goals and vision?	1	2	4	7	12	4.3
10.	Should employees of the Hospital (and their families) be entitled to be members of the Hospital corporation?	5	0	3	5	12	3.6
11.	Should members of the Hospital's medical staff (and their families) be entitled to be members of the Hospital corporation?	1	1	2	7	11	4.1
B.	**KEY GOVERNANCE RESPONSIBILITIES**						
1.	Do you believe that the board is effective at:						
	a) steering the Hospital towards its mission?	0	1	2	15	8	4.1
	b) communicating to members, stakeholders and the public?	0	2	1	17	6	4.0
	c) understanding the role of board vs. role of management?	0	1	0	13	12	4.4
	d) avoiding conflicts of interest?	0	1	1	3	21	4.7
	e) ensuring effective management is in place?	1	1	4	7	13	4.1
	f) maintaining fiscal responsibility?	1	4	4	12	5	3.6
	g) planning for succession and diversity?	0	6	5	9	6	3.6
	h) implementing systems to control risk?	0	8	3	10	4	3.4

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
C.	RELATIONSHIP WITH CEO AND MANAGEMENT						
1.	Does your board have a written job description for the CEO?	1	1	3	3	18	4.4
2.	If your answer to the previous question is "yes", does the board regularly update the CEO's job description?	2	3	10	4	7	3.4
3.	Does your board also set specific CEO performance expectations each year?	0	1	2	6	16	4.5
4.	Are yearly adjustments to the CEO's compensation made on the basis of a formal performance evaluation?	1	2	2	5	16	4.3
5.	Is the CEO provided with concrete and candid feedback regarding her performance each year?	0	0	3	6	17	4.5
6.	If the CEO resigned unexpectedly, has your board identified an interim successor to the CEO to ensure smooth (interim) management transition?	6	9	9	1	1	2.3
7.	Were you satisfied with the selection process undertaken with respect to the current CEO?	1	1	3	4	17	4.5
8.	Do you feel the board required more information about the candidates who applied for the CEO position?	13	4	6	2	1	2.0
9.	Do you feel the board required more information about the reasons used by the CEO Search Committee for rejecting candidates who applied for the CEO position?	12	6	6	0	2	2.0
10.	Does the CEO provide sufficient information to the board in order for the board to make appropriate decisions:						
	a) current CEO?	0	0	4	6	16	4.6
	b) past CEO?	5	9	7	4	1	2.7

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
11.	Does the CEO give the board clearly understandable information in order for the board to make appropriate decisions:						
	a) current CEO?	0	1	4	7	14	4.3
	b) past CEO?	3	10	7	5	1	2.6
12.	Does the CEO give the board adequate time to make necessary decisions (e.g., approval of operating plan, recovery plan):						
	a) current CEO?	0	2	5	7	12	4.3
	b) past CEO?	2	6	10	6	2	3.0
13.	When a board decision needs to be made, does administration typically present the board with a series of options from which to choose:						
	a) current CEO?	0	1	4	9	11	4.2
	b) past CEO?	0	8	7	2	9	3.5
14.	Do you believe that the CEO ever makes governance decisions that are the proper jurisdiction of the board:						
	a) current CEO?	13	6	5	1	1	1.9
	b) past CEO?	8	6	8	2	2	2.4
15.	Do you agree with the finding in the Hamilton Health Sciences' operational review that a board should treat information received from administration with "a degree of oversight and healthy scepticism"?	2	5	5	6	8	3.5
16.	Does the Hospital have difficulty retaining senior management?[*]	3	8	2	7	5	3.1

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[*] One respondent noted that there had been a problem in this area in the past, but that it is currently stable. Another respondent noted that the CFO role continued to be a problem.

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
17.	Does your board *often* become involved in day-to-day operational matters (e.g., staffing matters, complaints about service)?	13	13	0	0	0	1.5
18.	Does your board *sometimes* become involved in day-to-day operational matters (e.g., staffing matters, complaints about service)?	5	5	1	14	1	3.0
D.	**RESPONSIBILITY FOR QUALITY OF CARE & CREDENTIALING**						
1.	Does your board set explicit standards that convey its expectations regarding the quality of care provided by the Hospital?	4	4	3	9	6	3.3
2.	Has the board established a mechanism to measure the quality of care provided by the Hospital?	3	5	4	10	4	3.3
3.	If the answer to the preceding question is "yes", has the board benchmarked its measurement mechanism with those of its peers?	1	4	5	9	0	3.0
4.	Does your board participate meaningfully in the evaluation of the experience, competence, performance, and outcomes of each individual *physician* prior to appointment or reappointment to the medical staff?*	9	11	3	3	0	2.0
5.	Does your board participate meaningfully in the evaluation of the experience, competence, performance, and outcomes of each individual *dentist* prior to appointment or reappointment to the dental staff?	10	10	4	2	0	2.0
6.	Does your board have participate meaningfully in the evaluation of the experience, competence, performance, and outcomes of each individual *midwife* prior to appointment or reappointment to the midwifery staff?	10	11	4	1	0	1.8

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* One respondent commented that "The board rubberstamps the MAC recommendations."

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
7.	Has your board addressed the changes to the *Public Hospitals Act* that allow the board to grant privileges to "extended class nurses" (a.k.a. nurse practitioners)?	1	4	10	5	6	3.4
8.	Has your board considered how extended class nurses may be incorporated into the Hospital's professional staff to relieve pressures on physicians?	1	5	10	6	4	3.3
9.	Does your board periodically assess its credentialing process (i.e., its rigor, thoroughness, objectivity, and fairness)?	3	5	8	4	4	2.8
10.	Does your board periodically compare its credentialing process to those of its peers (i.e., benchmarking)?	7	4	10	4	1	2.5
11.	Does the Hospital check with the College of Physicians and Surgeons of Ontario each year to determine whether there are outstanding complaints against physicians, prior to reappointing physicians to the medical staff?	0	6	16	1	3	3.0
12.	Does your board periodically assess the compliance of the credentialing process with the *Public Hospitals Act*?	2	3	12	6	3	3.2
13.	Does the board conduct an annual performance evaluation of its Chief of Staff?	1	2	1	5	17	4.4
14.	Does the Chief of Staff provide sufficient information to the board in order for it to make necessary decisions:						
	a) current Chief of Staff?	0	0	4	10	12	4.3
	b) past Chief of Staff?	0	0	16	5	3	3.6
15.	Does the Chief of Staff give the board adequate time to make necessary decisions:						
	a) current Chief of Staff?	0	1	4	9	12	4.2
	b) past Chief of Staff?	0	0	16	6	1	3.3
16.	Is the information provided to the board by the Chief of Staff clear and understandable:						

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
	a) current Chief of Staff?	0	2	3	12	9	4.1
	b) past Chief of Staff?	0	1	16	4	2	3.3
17.	Has the board established a mechanism for annual performance evaluation of the Chiefs of Department?	4	6	10	3	3	2.8
18.	Do you agree with the recommendation in The Ottawa Hospital operational review that hospitals should re-institute the Joint Conference Committee to ensure open communication between medical staff, administration and the board?	0	1	9	11	5	3.8
19.	Is the medical staff generally supportive of the board?	0	0	4	10	12	4.3
20.	Is there open and honest communication, generally, between the medical staff and the board?	0	1	2	9	14	4.4
E.	**RESPONSIBILITY FOR FINANCIAL VIABILITY**						
1.	The Hospital is in a significant deficit position. Does your board have a recovery plan to achieve a balanced budget?	5	1	8	10	2	3.1
2.	If the answer to the preceding question is "yes", is the Hospital's recovery plan largely dependent on receiving increased Ministry funding?	0	1	6	7	3	3.7
3.	Are you aware of the Ontario Government's proposed balanced budget legislation (introduced last spring)?	2	2	1	8	13	4.1
4.	Is your board prepared to make service reductions in order to balance the budget, if so required?	5	4	6	8	3	3.0
5.	Has your board studied which services it could reduce in order to achieve a balanced budget?	8	2	5	9	2	2.8
6.	If service cuts are needed, does the board expect the Ministry to decide which services will be cut?	4	6	8	3	5	3.0

	Question	**Number of Scores**					**Board Average**
		1 **NO**	**2**	**3**	**4**	**5** **YES**	
7.	Have you read the Ministry's operational reviews of: a) Hamilton Health Sciences Centre? b) The Ottawa Hospital?	13	4	0	2	7	2.5
8.	Do you agree with the conclusions of those operational reviews that a hospital *must* provide services "within its funding envelope"?	2	3	7	11	3	3.4
9.	When the board initially approved moving forward with a construction management contract, were you aware that this type of arrangement was unusual for Ontario hospitals?[*]	1	2	10	4	9	3.7
10.	Was the board given sufficient information to understand the different types of arrangements available between the Hospital and its contractor (fixed price, construction management, etc.)?	1	1	10	5	9	3.8
11.	Did you understand that the Hospital was assuming the risk of cost overruns with the construction management contract?	1	2	8	7	9	3.9
12.	Was information about the risks and the process relating to the capital project presented in a manner that board members could clearly understand?	1	7	8	6	3	3.0
13.	If no additional funding is forthcoming from the Ministry, what do you believe is the appropriate remedial action for the Ministry to recommend/take with respect to the Hospital's financial situation and capital project:						
	a) appointment of a Supervisor (replacement of the entire board)?	18	1	3	1	3	1.8
	b) replacement of some board members?	16	2	4	3	1	1.9

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[*] A number of the respondents noted that they were not board members at the relevant time (their answers represent some of the "3" responses)

	Question	**Number of Scores**					**Board Average**
		1 NO	**2**	**3**	**4**	**5** YES	
	c) replacement of senior management?	16	2	3	5	0	1.9
	d) direction with respect to reduction of services?	3	2	2	9	10	3.8
F.	**RESPONSIBILITY FOR DEVELOPMENT OF POLICIES**						
1.	Does your board have a written communications policy relating to communications to stakeholders, regularly and in crisis situations?	1	4	5	8	7	3.6
2.	Does your board have a written policy relating to maintaining confidentiality of Hospital information?	0	0	1	10	14	4.5
3.	Does your board have a written policy that prohibits board members from voicing individual personal opinions that are contrary to, or inconsistent with, the views of the Hospital?	2	2	6	8	8	3.7
4.	Do board members ever speak publicly about their disagreement with board decisions or positions? [*]	11.5	8.5	2	3	1	2.0
5.	If the answer to the preceding question is "yes", does the board have a mechanism for dealing with board members who speak out publicly against the board?	2	0	5	2	1	3.0
6.	Does the board have a written policy for when matters should be discussed *in camera*?	2	2	3	8	11	3.9
7.	Does the board understand what types of matters must be discussed *in camera* and what types of matters may be discussed in public?	0	1	3	7	15	4.4
8.	Does the board have a written policy with respect to conflict of interest?	0	1	0	5	20	4.7

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[*] Two respondents reported that this had been a problem in the past, but is not currently an issue.

	Question	**Number of Scores**					**Board Average**
		1 **NO**	**2**	**3**	**4**	**5** **YES**	
9.	Does the board have a written policy that prohibits directors from receiving any benefit or any remuneration relating to their position on the board?	0	2	6	6	12	4.1
10.	Does the board have a mechanism in place for addressing breaches of its policies?	3	5	9	3	6	3.1
11.	Has your board conducted an audit of all board policies to ensure their continued relevance (within the past two years)?	4	2	8	7	5	3.3
G.	**DECISION-MAKING**						
1.	Does your board (generally) make decisions in a timely manner?	0	0	3	11	12	4.3
2.	Does the board have a mechanism in place that allows meetings by teleconference?	3	2	6	8	7	3.5
3.	If the answer to the preceding question is "yes", does the board (or its committees) *regularly* hold meetings by teleconference?*	12	5	4	1	1	1.8
4.	Does your board have a formal mechanism in place for reviewing recommendations and proposals forwarded by management and the hospital's health profession staff?	3	4	7	5	7	3.3
5.	Is the Executive Committee of the board authorized to make decisions on behalf of the board?**	1	4	1	14	6	3.8
6.	In a matter of emergency, do you believe that the full board (rather than the Executive Committee) should have an opportunity to meet to make a decision?	2	5	0	10	9	3.7

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* It was noted by one respondent that teleconferencing is used at the committee level.

** A number of respondents pointed out that there are different rules regarding Executive Committee authority in the summer months.

	Question	Number of Scores					Board Average
		1 NO	2	3	4	5 YES	
7.	Does the board generally understand when professional advice should be sought (legal, financial, other)?	0	1	0	11	13	4.4
III.	**BOARD AND COMMITTEE STRUCTURE**						
1.	Has your board conducted a review of its committee structure in the last two years?	1	1	7	6	9	3.9
2.	Do you believe there too many board committees?	11	5	1	4	5	2.5
3.	Are there any standing board committees that do not meet regularly?	15	5	3	1	2	1.8
4.	Do board committees ever have difficulty in achieving quorum?	4	6	6	7	3	3.0
5.	Do board committees regularly have difficulty in achieving quorum?	12	8	4	2	0	1.8
6.	Does each board committee have terms of reference specifying its objectives and tasks?	0	1	2	5	18	4.5
IV.	**BOARD COMPOSITION**						
1.	Are new members of your board selected on the basis of criteria or guidelines established by the board?	1	0	3	9	13	4.3
2.	Does your board advertise annually for candidates who have an interest in joining the board?	5	6	5	3	6	3.0
3.	Has the Hospital's financial situation made it more difficult to attract candidates to the board?	9	5	7	3	2	2.4
4.	Do you believe that the 9-year term limit for directors is too long (i.e., does a director reach "burn out" in his or her last term)?	7	7	5	3	4	2.6
5.	Is a director's reappointment to the board based (in part) on his or her director's past performance in the previous term?	3	6	7	8	2	3.0

	Question	**Number of Scores**					**Board Average**
		1 No	2	3	4	5 Yes	
6.	Do your by-laws set out a mechanism and associated criteria for removing a director from office?	3	3	10	3	6	3.1
7.	Do you believe the board has too many ex officio directors (e.g., municipal representative, foundation representative, auxiliary representative)?	11	11	1	1	2	1.8
8.	Do you believe that ex officio directors are less committed to the hospital than elected directors?	18	6	1	1	0	1.4
9.	Do the ex officio members of your board tend to represent narrow stakeholder interests rather than the hospital's stakeholders in general?	13	6	3	4	1	1.9
10.	Does your board have a mechanism for dealing with directors who have difficulty in attending meetings?	1	2	7	8	7	3.7
11.	Has your board done a formal assessment of its composition in the past two years?	3	4	11	4	4	3.1
12.	In your view, is your board composed of individuals who possess the appropriate mix of knowledge, skills, experience, perspectives, and characteristics to effectively govern the hospital, both now and in the future?	0	0	0	10	16	4.6
13.	Do directors generally feel free to express their opinions at the board table?	0	0	1	2	18	4.8
14.	Do you ever abstain from voting on a matter because you:						
	a) want to avoid liability resulting from the decision?	21	2	3	0	0	1.3
	b) feel you do not have enough information to make the decision?	13	4	2	6	1	2.2
	c) feel you do not understand the information presented?	18	4	4	2	0	1.7

	Question	Number of Scores					Board Average
		1 (lo)	2	3	4	5 (hi)	
[illegible]	**[illegible]**						
1.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.	[illegible]						
	a) [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	b) [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	[illegible]	[illegible]					[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]						
[illegible]	[illegible]						
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	Question	Number of Scores					Board Average
		1 no	2	3	4	5 yes	
3.	Do you have a general understanding of the Hospital's budget and the way in which resources are deployed across major service areas and activities?	0	0	0	15	11	4.4
4.	Would you be willing to serve an additional term on this board?[1]	2	0	3	4	17	4.3
L.	**YOUR INVOLVEMENT AT MEETINGS**						
1.	Do you review all background materials prior to board meetings?	0	0	1	4	21	4.8
2.	Do you arrive at meetings on time?	0	0	1	5	19	4.7
3.	Do you actively participate in your board's discussions and deliberations?	0	0	1	5	19	4.7
4.	Do you request additional information, ask questions, and seek clarification when you do not understand an issue the board is deliberating?	0	0	1	7	18	4.6
5.	Can you ask tough questions when the need arises?	0	0	1	4	20	4.8
6.	Are you comfortable expressing dissenting opinions?	1	2	1	6	16	4.3
7.	Do you vote "no" when you disagree with a proposed policy or decision?	2	0	2	3	19	4.4
8.	Once your board formulates a policy or makes a decision, are you willing and able to support it (regardless of how you voted on the matter)?	0	0	1	3	21	4.8

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[1] The respondent who circled "1" in response to this question is a past-member of the board.

Appendix IV: Comparison of Department Workload Estimates for Capital Project

Program	Workload Statistic	Agnew Peckham	MIS	HRSRH Forecast
		1996/97	2000/01	2003/04
Cardiovascular Services	Procedures			
	Cardiac stress tests	2,880	2,007	3000-3500
	Echocardiography	3,346	3,898	3500-4000
	Holter scans	2,503	5,761	3,000
Continuing Care and Palliative Services	Beds	60	58	
	Patient Days	20,512	20,116	35,770
Emergency Department	Visits	68,743	60,424	70,000
	Admissions	9,571	8,470	10,500
Critical Care Unit	Beds	42	42	50
	Patient days	12,504	12,170	7,040
Respiratory Therapy	Procedures			
	Pulmonary Diagnostics	23,227	20,894	25,500
	Other Diagnostics	40,644	19,206	45,000
	Routine Therapeutics	72,232	35,991	75,000
	Critical Care Therapy	87,902	84,709	100,000
	Sleep Studies	885	919	1,000
Mental Health	Beds	24	24	25-57
	Patient days	8,256	8,624	6,570-19,725
Neuroscience Diagnostic Centre	Procedures			
	EMG	773	704	2,200
	EEG	946	91	1,300
Inpatient Rehabilitation	Rehab Unit Beds	22	22	31
	Rehab Unit Patient days	6,953	6,337	10,185
	Attendance Days			
	Physiotherapy	6,301	4,231	6,620
	Occupational Therapy	4,087	3,959	5,735
Central and Ambulatory Rehabilitation	Attendance Days			
	Physiotherapy	16,403	16,735	22,000
	Occupational Therapy	3,191	5,870	3,565
	Prosthetics & orthotics	3,889	1,109	4,475
	Speech language pathology	99	346	110
Surgical Suite	Surgical Cases	19,908	18,514	23,000-25,000
Day Surgery Unit	Surgical Cases	14,027	1,362	20,000
Ambulatory Procedures Unit	Endoscopies	7,520	6,943	7,650-9,475
Maternal and Newborn Care Unit	Patient Days			
	Antenatal and postpartum	7,885	6,619	6,915-7,215
	Intensive care nursery	3,318	2,540	3,400
	Beds			
	Antenatal and postpartum	54	54	55
	Intensive care nursery	14	10	13
	Outpatient Visits	2,534	4,717	5,000
Pediatric Unit	Beds	30	30	20
	Medical day care visits	55	1,493	50-60
Ambulatory Care Services	Ambulatory care unit visits	57,913	123,059	71,840
Medical/Surgical Inpatient Units	Beds	416	344	275
	Patient days	132,831	115,270	95,355
Diagnostic Imaging	Exams			
	Ultrasound	20,463	20,432	24,000-26,000
	General radiography & fluoroscopy	71,094	82,086	71,000-78,250
	Angiography	1,380	8,495	1,800
	Mammography	4,067	7,210	5,000
	CT	11,372	15,485	11,500
	MRI	N/A	18,988	70.00-10,000
	Nuclear medicine	11,000	13,829	13,500-14,800
Laboratory Services	Workload Units	10,606,490	9,048,471	10,606,490
Admitting/Registration	Admissions	26,142	19,976	25,000

*The hospital reported infant and adult patient days together.

APPENDIX V:
Bed Summary for Capital Project

Clinical Program	*Current Beds LH*	*Current Beds MM*	*Current Beds SJ*	*Current location*	*Current Beds by Prog*	*Original HSRC*	*Revised (MoH)*	*Proposed Beds*	*Location at Project Complet'*	*Proposed Phase*
Medical/Surgical/Critical Care										
Medical Program										
Medical	26			4th						
Medical - Flex beds	2			4th						
Medical	39			8th						
Medical - Flex beds	4			8th						
Medical			30	4th A				58	4N	2b
Medical			32	4th B & C				30	7N	2b
Medical - Flex beds			6	4th B & C						
Palliative Care	6			4th						
Oncology	18			4th						
Subtotal Medical	*95*	*0*	*68*		*163*			*88*		
Surgery Program										
Surgery			36	2nd B&C				40	6N	2b
Surgery		35		4th				31	7N	2b
Surgery			17	3rd D						
Surgery			6	5th A						
Neurosurgery			16	5th A				12	9N	2b
Orthopaedics			29	5th B & C				32	9N	2b
Subtotal Surgery	*0*	*35*	*104*		*139*			*115*		
Intermediate Care										
Stepdown		7		4th						
Step down	4			7th						
Special Care unit			8	5th A				10	6N	2b
Subtotal Intermediate C.	*4*	*7*	*8*		*19*			*10*		
Critical Care										
Critical Care		15		4th				29	3M	2a
ICU			8	2nd A						
Subtotal Critical Care	*0*	*15*	*8*		*23*			*29*		

APPENDIX V:
Bed Summary for Capital Project

Clinical Program	*Current Beds LH*	*Current Beds MM*	*Current Beds SJ*	*Current location*	*Current Beds by Prog*	*Original HSRC*	*Revised (MoH)*	*Proposed Beds*	*Location at Project Complet'*	*Proposed Phase*
Cardiovascular										
Cardiovascular		40		5th				14	8N	2b
Cardiology - Short Stay		10		5th						
Cardiology - Angioplasty		10		5th				47	8N	2b
Subtotal Cardiovascular	*0*	*60*	*0*		*60*			*61*		
Paediatrics										
Paediatrics			33	2nd D				20	5N	2b
Subtotal Paediatrics	*0*	*0*	*33*		*33*			*20*		
Obstetrics										
Obs - Combined Care			15	3rd				28	5M	2a
Obs - Ante & Post Partum			12	3rd						
NICU ***(excl from count)***			10	3rd A				28	5M	2a
Subtotal Obstetrics	*0*	*0*	*27*		*27*			*28*		
TOTAL ACUTE CARE	***99***	***114***	***244***		***457***	***345***	***389***	***351***		
Mental Health										
Mental Health			24	Gr D				39	6M	2a
Subtotal Mental Health	*0*	*0*	*24*		*24*	*39*	*39*	*39*		
Complex Continuing Care/LTC/Transitional Care										
Subacute						75				
Interim Long Term Care	40									
Complex Continuing Care	32							45	6S	1
Complex Continuing Care	20			9th		100	85	45	6S	1
Transitional Care								30	3S	1
Transitional Care								45	4S	1
Subtotal CCC	*92*	*0*	*0*		*92*	*175*	*85*	*165*		
Rehabilitation										
Intensive Rehab	22									
Local (Short & Long Term)						31	39	31	Wing	
Regional						0	23			
Subtotal Rehabilitation	*22*	*0*	*0*		*22*	*31*	*62*	*31*		

APPENDIX V:
Bed Summary for Capital Project

Clinical Program	*Current Beds LH*	*Current Beds MM*	*Current Beds SJ*	*Current location*	*Current Beds by Prog*	*Original HSRC*	*Revised (MoH)*	*Proposed Beds*	*Location at Project Complet'*	*Proposed Phase*
TOTAL BEDS ON-SITE	*209*	*110*	*264*		*602*	*590*	*575*	*586*		
Off-Site beds										
Adolescent Mental Health						12	12	12		
Transition to Independent Living							5	5		
Subtotal Off-Site						*12*	*17*	*17*		
GRAND TOTAL						602	592	603		

APPENDIX VI – CAPITAL PROJECT VARIANCE TEMPLATE

HOPITAL REGIONAL DE SUDBURY REGIONAL HOSPITAL
SUDBURY, ONTARIO

MAY 13, 2002
FILE: [illegible]

ref. #	Minister's Approval (June 16, 1998)	1 Agnew FP (Apr. 24/98) area* sq. ft.		2 Func. Pgm Report area* sq. ft.	cost per sq. ft.	3 capital (000)
1	CARDIOVASCULAR					
		9,115	new constr	9,115	209.00	1,905
		-	renovation	-	-	-
		-	remains exis	-	-	-
		9,115	total	9,115		1,905
2	CONTINUING CARE & SUB-ACUTE					
		77,385	new constr	16,849	209.00	3,521
		-	renovation	-	-	-
		-	remains exis	-	-	-
		77,385	total	16,849		3,521
3	EMERGENCY / TRAUMA					
		23,115	new constr	11,415	209.00	2,386
		-	renovation	11,700	100.00	1,170
		-	remains exis	-	-	-
		23,115	total	23,115		3,556
4	CRITICAL CARE UNIT					
		18,125	new constr	18,125	209.00	3,788
		-	renovation	-	-	-
		-	remains exis	-	-	-
		18,125	total	18,125		3,788
5	HAVEN PROGRAM					
		1,475	new constr	1,475	209.00	308
		-	renovation	-	-	-
		-	remains exis	-	-	-
		1,475	total	1,475		308
6	NEPHROLOGY					
		15,255	new constr	15,255	209.00	3,188
		-	renovation	-	-	-
		-	remains exis	-	-	-
		15,255	total	15,255		3,188
7	RESPIRATORY THERAPY SERVICES					
		3,985	new constr	3,985	209.00	833
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3,985	total	3,985		833
8	MENTAL HEALTH PROGRAM					
		22,905	new constr	23,539	209.00	4,920
		-	renovation	-	-	-
		-	remains exis	-	-	-
		22,905	total	23,539		4,920
9	NEUROSCIENCES PROGRAM					
	INCL. IN AMB. CARE	-	new constr	-	-	-
		-	renovation	15,000	100.00	1,500
		-	remains exis	-	-	-
		-	total	15,000		1,500
10	INPATIENT REHABILITATION UNIT					
		18,225	new constr	16,975	209.00	3,548
		-	renovation	1,250	45.00	56
		-	remains exis	-	-	-
		18,225	total	18,225		3,604
11	CENTRAL & AMB. REHAB SERVICES					
		24,055	new constr	17,465	209.00	3,650
		-	renovation	6,590	100.00	659
		-	remains exis	-	-	-
		24,055	total	24,055		4,309
12	SURGERY PROGRAM					
		36,400	new constr	13,250	209.00	2,769
		-	renovation	23,150	100.00	2,315
		-	remains exis	-	-	-
		36,400	total	36,400		5,084
13	DAY SURGERY UNIT					
		6,485	new constr	6,485	209.00	1,355
		-	renovation	-	-	-
		-	remains exis	-	-	-
		6,485	total	6,485		1,355

Sketch Plan Report (P.C.L. - April 30, 1999)	1 Agnew FP (Apr. 24/98) area* sq. ft.		3 Sketch Plan area* sq. ft.	cost per sq. ft.	4 capital (000)
CARDIOVASCULAR					
	9,115	new constr	9,772	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	9,115	total	9,772		-
CONTINUING CARE & SUB-ACUTE					
	77,385	new constr	78,621	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	77,385	total	78,621		-
EMERGENCY / TRAUMA					
	23,115	new constr	13,757	-	-
	-	renovation	9,249	-	-
	-	remains exis	-	-	-
	23,115	total	23,006		-
CRITICAL CARE UNIT					
	18,125	new constr	18,331	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	18,125	total	18,331		-
HAVEN PROGRAM					
	1,475	new constr	1,440	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	1,475	total	1,440		-
NEPHROLOGY					
	15,255	new constr	15,958	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	15,255	total	15,958		-
RESPIRATORY THERAPY SERVICES					
	3,985	new constr	4,277	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	3,985	total	4,277		-
MENTAL HEALTH PROGRAM					
	22,905	new constr	23,436	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	22,905	total	23,436		-
NEUROSCIENCES PROGRAM					
INCL. IN AMB. CARE	-	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	-	total	-		-
INPATIENT REHABILITATION UNIT					
	18,225	new constr	-	-	-
	-	renovation	7,229	-	-
	-	remains exis	12,909	-	-
	18,225	total	20,138		-
CENTRAL & AMB. REHAB SERVICES					
	24,055	new constr	-	-	-
	-	renovation	25,409	-	-
	-	remains exis	-	-	-
	24,055	total	25,409		-
SURGERY PROGRAM					
	36,400	new constr	22,774	-	-
	-	renovation	13,626	-	-
	-	remains exis	-	-	-
	36,400	total	36,400		-
DAY SURGERY UNIT					
	6,485	new constr	6,222	-	-
	-	renovation	2,834	-	-
	-	remains exis	-	-	-
	6,485	total	9,056		-

Current Estimate (May 2002)	1 Agnew FP (Apr. 24/98) area* sq. ft.		Current Estimate area* sq. ft.	cost per sq. ft.	capital (000)
CARDIOVASCULAR					
	9,115	new constr	9,954	300.00	2,986
	-	renovation	-	-	-
	-	remains exis	-	-	-
	9,115	total	9,954		2,986
CONTINUING CARE & SUB-ACUTE					
	77,385	new constr	72,671	388.00	28,174
	-	renovation	-	-	-
	-	remains exis	-	-	-
	77,385	total	72,671		28,174
EMERGENCY / TRAUMA					
	23,115	new constr	14,386	300.00	4,316
	-	renovation	9,249	220.00	2,035
	-	remains exis	-	-	-
	23,115	total	23,635		6,351
CRITICAL CARE UNIT					
	18,125	new constr	18,227	300.00	5,468
	-	renovation	-	-	-
	-	remains exis	-	-	-
	18,125	total	18,227		5,468
HAVEN PROGRAM					
	1,475	new constr	1,449	200.00	290
	-	renovation	-	-	-
	-	remains exis	-	-	-
	1,475	total	1,449		290
NEPHROLOGY					
	15,255	new constr	12,914	200.00	2,583
	-	renovation	-	-	-
	-	remains exis	-	-	-
	15,255	total	12,914		2,583
RESPIRATORY THERAPY SERVICES					
	3,985	new constr	4,305	200.00	861
	-	renovation	-	-	-
	-	remains exis	-	-	-
	3,985	total	4,305		861
MENTAL HEALTH PROGRAM					
	22,905	new constr	21,797	240.00	5,231
	-	renovation	-	-	-
	-	remains exis	-	-	-
	22,905	total	21,797		5,231
NEUROSCIENCES PROGRAM					
INCL. IN AMB. CARE	-	new constr	1,367	420.00	574
	-	renovation	-	-	-
	-	remains exis	-	-	-
	-	total	1,367		574
INPATIENT REHABILITATION UNIT					
	18,225	new constr	-	-	-
	-	renovation	7,229	140.00	1,012
	-	remains exis	12,182	35.00	426
	18,225	total	19,411		1,438
CENTRAL & AMB. REHAB SERVICES					
	24,055	new constr	-	-	-
	-	renovation	20,749	120.00	2,490
	-	remains exis	-	-	-
	24,055	total	20,749		2,490
SURGERY PROGRAM					
	36,400	new constr	21,141	320.00	6,765
	-	renovation	13,626	210.00	2,861
	-	remains exis	-	-	-
	36,400	total	34,767		9,626
DAY SURGERY UNIT					
	6,485	new constr	7,895	240.00	1,895
	-	renovation	2,834	160.00	453
	-	remains exis	-	-	-
	6,485	total	10,729		2,348

Current Estimate (May 2002) - ***PHASE 1***	1 Agnew FP (Apr. 24/98) area* sq. ft.		Current Estimate area* sq. ft.	cost per sq. ft.	capital (000)
CARDIOVASCULAR					
	9,115	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	9,115	total	-		-
CONTINUING CARE & SUB-ACUTE					
	77,385	new constr	59,632	420.00	25,045
	-	renovation	-	-	-
	-	remains exis	-	-	-
	77,385	total	59,632		25,045
EMERGENCY / TRAUMA					
	23,115	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	23,115	total	-		-
CRITICAL CARE UNIT					
	18,125	new constr	allow	-	2,187
* *shell only - cost for*	-	renovation	-	-	-
fitout in Phase 2	-	remains exis	-	-	-
	18,125	total	-		2,187
HAVEN PROGRAM					
	1,475	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	1,475	total	-		-
NEPHROLOGY					
	15,255	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	15,255	total	-		-
RESPIRATORY THERAPY SERVICES					
	3,985	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	3,985	total	-		-
MENTAL HEALTH PROGRAM					
	22,905	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	22,905	total	-		-
NEUROSCIENCES PROGRAM					
INCL. IN AMB. CARE	-	new constr	1,367	420.00	574
	-	renovation	-	-	-
	-	remains exis	-	-	-
	-	total	1,367		574
INPATIENT REHABILITATION UNIT					
	18,225	new constr	-	-	-
	-	renovation	7,229	140.00	1,012
	-	remains exis	12,182	35.00	426
	18,225	total	19,411		1,438
CENTRAL & AMB. REHAB SERVICES					
	24,055	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	24,055	total	-		-
SURGERY PROGRAM					
	36,400	new constr	allow	-	2,537
* *shell only - cost for*	-	renovation	-	-	-
fitout in Phase 2	-	remains exis	-	-	-
	36,400	total	-		2,537
DAY SURGERY UNIT					
	6,485	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	6,485	total	-		-

Current Estimate (May 2002) - ***PHASE 2***	1 Agnew FP (Apr. 24/98) area* sq. ft.		Current Estimate area* sq. ft.	cost per sq. ft.	capital (000)
CARDIOVASCULAR					
	9,115	new constr	9,954	300.00	2,986
	-	renovation	-	-	-
	-	remains exis	-	-	-
	9,115	total	9,954		2,986
CONTINUING CARE & SUB-ACUTE					
	77,385	new constr	13,039	240.00	3,129
	-	renovation	-	-	-
	-	remains exis	-	-	-
	77,385	total	13,039		3,129
EMERGENCY / TRAUMA					
	23,115	new constr	14,386	300.00	4,316
	-	renovation	9,249	220.00	2,035
	-	remains exis	-	-	-
	23,115	total	23,635		6,351
CRITICAL CARE UNIT					
	18,125	new constr	18,227	180.00	3,281
* *fitout only - cost for*	-	renovation	-	-	-
shell in Phase 1	-	remains exis	-	-	-
	18,125	total	18,227		3,281
HAVEN PROGRAM					
	1,475	new constr	1,449	200.00	290
	-	renovation	-	-	-
	-	remains exis	-	-	-
	1,475	total	1,449		290
NEPHROLOGY					
	15,255	new constr	12,914	200.00	2,583
	-	renovation	-	-	-
	-	remains exis	-	-	-
	15,255	total	12,914		2,583
RESPIRATORY THERAPY SERVICES					
	3,985	new constr	4,305	200.00	861
	-	renovation	-	-	-
	-	remains exis	-	-	-
	3,985	total	4,305		861
MENTAL HEALTH PROGRAM					
	22,905	new constr	21,797	240.00	5,231
	-	renovation	-	-	-
	-	remains exis	-	-	-
	22,905	total	21,797		5,231
NEUROSCIENCES PROGRAM					
INCL. IN AMB. CARE	-	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	-	total	-		-
INPATIENT REHABILITATION UNIT					
	18,225	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exis	-	-	-
	18,225	total	-		-
CENTRAL & AMB. REHAB SERVICES					
	24,055	new constr	-	-	-
	-	renovation	20,749	120.00	2,490
	-	remains exis	-	-	-
	24,055	total	20,749		2,490
SURGERY PROGRAM					
	36,400	new constr	21,141	200.00	4,228
* *fitout only - cost for*	-	renovation	13,626	210.00	2,861
shell in Phase 1	-	remains exis	-	-	-
	36,400	total	34,767		7,089
DAY SURGERY UNIT					
	6,485	new constr	7,895	240.00	1,895
	-	renovation	2,834	160.00	453
	-	remains exis	-	-	-
	6,485	total	10,729		2,348

APPENDIX VI – CAPITAL PROJECT VARIANCE TEMPLATE

	Minister's Approval (June 16, 1998)					
ref #		1 Agnew FP (Apr. 24/98) area* sq. ft.		2 Func. Pgm Report area* sq. ft.	cost per sq. ft.	2 capital (000)
14	AMB. PROCEDURES UNIT					
		7 465	new constr	7 465	209.00	1 560
		-	renovation	-	-	-
		-	remains exis	-	-	-
		7 465	total	7 465		1 560
15	PREADMISSION CLINIC					
		3 355	new constr	3 355	209.00	701
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3 355	total	3 355		701
16	MATERNAL & NEWBORN CARE UNIT					
		34 135	new constr	34 135	209.00	7 134
		-	renovation	-	-	-
		-	remains exis	-	-	-
		34 135	total	34 135		7 134
17	PAEDIATRIC UNIT					
		12 530	new constr	-	-	-
		-	renovation	15 000	100.00	1 500
		-	remains exis	-	-	-
		12 530	total	15 000		1 500
18	CHILDREN'S TREATMENT CENTRE					
		16 525	new constr	16 983	135.00	2 293
		-	renovation	-	-	-
		-	remains exis	-	-	-
		16 525	total	16 983		2 293
19	AMBULATORY CARE SERVICES					
		28 965	new constr	12 400	209.00	2 592
		-	renovation	5 100	100.00	510
		-	remains exis	-	-	-
		28 965	total	17 500		3 102
20	ALL MEDICAL / SURGICAL INPATIENT					
		124 425	new constr	33 127	209.00	6 924
		-	renovation	-	-	-
		-	remains exis	-	-	-
		124 425	total	33 127		6 924
21	DEPT. OF GENETICS					
		5 175	new constr	5 175	209.00	1 082
		-	renovation	-	-	-
		-	remains exis	-	-	-
		5 175	total	5 175		1 082
22	DIAGNOSTIC IMAGING					
		37 015	new constr	22 842	232.00	5 299
		-	renovation	8 900	100.00	890
		-	remains exis	-	-	
		37 015	total	31 742		6 189
23	LABORATORY SERVICES					
		14 950	new constr	-	-	-
		-	renovation	4 710	96.39	454
		-	remains exis	-	-	-
		14 950	total	4 710		454
24	ADMINISTRATION & FINANCE					
		7 605	new constr	7 605	163.00	1 240
		-	renovation	-	-	-
		-	remains exis	-	-	-
		7 605	total	7 605		1 240
25	ADMITTING / REGISTRATION					
		1 090	new constr	1 090	163.00	178
		-	renovation	-	-	-
		-	remains exis	-	-	-
		1 090	total	1 090		178
26	BIOMEDICAL ENGINEERING					
		2 430	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		2 430	total	-		-

	Sketch Plan Report (P.C.L. - April 30, 1999)					
ref #		1 Agnew FP (Apr. 24/98) area* sq. ft.		3 Sketch Plan area* sq. ft.	cost per sq. ft.	4 capital (000)
14	AMB. PROCEDURES UNIT					
		7 465	new constr	7 148	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		7 465	total	7 148		-
15	PREADMISSION CLINIC					
		3 355	new constr	3 958	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3 355	total	3 958		-
16	MATERNAL & NEWBORN CARE UNIT					
		34 135	new constr	36 283	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		34 135	total	36 283		-
17	PAEDIATRIC UNIT					
		12 530	new constr	-	-	-
		-	renovation	13 108	-	-
		-	remains exis	-	-	-
		12 530	total	13 108		-
18	CHILDREN'S TREATMENT CENTRE					
		16 525	new constr	18 972	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		16 525	total	18 972		-
19	AMBULATORY CARE SERVICES					
		28 965	new constr	16 734	-	-
		-	renovation	1 972	-	-
		-	remains exis	-	-	-
		28 965	total	18 706		-
20	ALL MEDICAL / SURGICAL INPATIENT					
		124 425	new constr	-	-	-
		-	renovation	44 973	-	-
		-	remains exis	44 554	-	-
		124 425	total	89 527		-
21	DEPT. OF GENETICS					
		5 175	new constr	1 859	-	-
		-	renovation	1 936	-	-
		-	remains exis	-	-	-
		5 175	total	3 795		-
22	DIAGNOSTIC IMAGING					
		37 015	new constr	15 887	-	-
		-	renovation	17 317	-	-
		-	remains exis	-	-	-
		37 015	total	33 204		-
23	LABORATORY SERVICES					
		14 950	new constr	1 353	-	-
		-	renovation	14 497	-	-
		-	remains exis	-	-	-
		14 950	total	15 850		-
24	ADMINISTRATION & FINANCE					
		7 605	new constr	1 809	-	-
		-	renovation	4 632	-	-
		-	remains exis	1 164	-	-
		7 605	total	7 605		-
25	ADMITTING / REGISTRATION					
		1 090	new constr	1 080	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		1 090	total	1 080		-
26	BIOMEDICAL ENGINEERING					
		2 430	new constr	1 248	-	-
		-	renovation	1 430	-	-
		-	remains exis	-	-	-
		2 430	total	2 678		-

	Current Estimate (May 2002)					
ref #		1 Agnew FP (Apr. 24/98) area* sq. ft.		Current Estimate area* sq. ft.	cost per sq. ft.	capital (000)
14	AMB. PROCEDURES UNIT					
		7 465	new constr	7 099	480.00	3 408
		-	renovation	-	-	-
		-	remains exis	-	-	-
		7 465	total	7 099		3 408
15	PREADMISSION CLINIC					
		3 355	new constr	3 924	200.00	785
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3 355	total	3 924		785
16	MATERNAL & NEWBORN CARE UNIT					
		34 135	new constr	31 449	280.00	8 806
		-	renovation	-	-	-
		-	remains exis	-	-	-
		34 135	total	31 449		8 806
17	PAEDIATRIC UNIT					
		12 530	new constr	-	-	-
		-	renovation	13 501	160.00	2 160
		-	remains exis	960	35.00	34
		12 530	total	14 461		2 194
18	CHILDREN'S TREATMENT CENTRE					
		16 525	new constr	23 099	380.00	8 778
		-	renovation	-	-	-
		-	remains exis	-	-	-
		16 525	total	23 099		8 778
19	AMBULATORY CARE SERVICES					
		17 500	new constr	15 310	367.00	5 621
		-	renovation	1 972	140.00	276
		-	remains exis	-	-	-
		17 500	total	17 282		5 897
20	ALL MEDICAL / SURGICAL INPATIENT					
		89 570	new constr	-	-	-
		-	renovation	44 973	140.00	6 296
		-	remains exis	36 579	35.00	1 280
		89 570	total	81 552		7 576
21	DEPT. OF GENETICS					
		3 375	new constr	2 101	400.00	840
		-	renovation	1 937	140.00	271
		-	remains exis	-	-	-
		3 375	total	4 038		1 111
22	DIAGNOSTIC IMAGING					
		34 015	new constr	15 075	480.00	7 236
		-	renovation	19 097	220.00	4 201
		-	remains exis	-	-	-
		34 015	total	34 172		11 437
23	LABORATORY SERVICES					
		16 750	new constr	3 164	480.00	1 519
		-	renovation	13 107	220.00	2 884
		-	remains exis	-	-	-
		16 750	total	16 271		4 403
24	ADMINISTRATION & FINANCE					
		7 605	new constr	1 810	380.00	688
		-	renovation	4 632	120.00	556
		-	remains exis	1 164	35.00	41
		7 605	total	7 606		1 285
25	ADMITTING / REGISTRATION					
		1 090	new constr	1 146	200.00	229
		-	renovation	-	-	-
		-	remains exis	-	-	-
		1 090	total	1 146		229
26	BIOMEDICAL ENGINEERING					
		2 430	new constr	1 057	180.00	190
		-	renovation	1 430	100.00	143
		-	remains exis	-	-	-
		2 430	total	2 487		333

	Current Estimate (May 2002) - ***PHASE 1***					
ref #		1 Agnew FP (Apr. 24/98) area* sq. ft.		Current Estimate area* sq. ft.	cost per sq. ft.	capital (000)
14	AMB. PROCEDURES UNIT					
		7 465	new constr	7 099	480.00	3 408
		-	renovation	-	-	-
		-	remains exis	-	-	-
		7 465	total	7 099		3 408
15	PREADMISSION CLINIC					
		3 355	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3 355	total	-		-
16	MATERNAL & NEWBORN CARE UNIT					
		34 135	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		34 135	total	-		-
17	PAEDIATRIC UNIT					
		12 530	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		12 530	total	-		-
18	CHILDREN'S TREATMENT CENTRE					
		16 525	new constr	23 099	380.00	8 778
		-	renovation	-	-	-
		-	remains exis	-	-	-
		16 525	total	23 099		8 778
19	AMBULATORY CARE SERVICES					
		17 500	new constr	12 512	400.00	5 005
		-	renovation	-	-	-
		-	remains exis	-	-	-
		17 500	total	12 512		5 005
20	ALL MEDICAL / SURGICAL INPATIENT					
		89 570	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		89 570	total	-		-
21	DEPT. OF GENETICS					
		3 375	new constr	2 101	400.00	840
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3 375	total	2 101		840
22	DIAGNOSTIC IMAGING					
		34 015	new constr	15 075	480.00	7 236
		-	renovation	-	-	-
		-	remains exis	-	-	-
		34 015	total	15 075		7 236
23	LABORATORY SERVICES					
		16 750	new constr	3 164	480.00	1 519
		-	renovation	2 039	220.00	449
		-	remains exis	-	-	-
		16 750	total	5 203		1 968
24	ADMINISTRATION & FINANCE					
		7 605	new constr	1 810	380.00	688
		-	renovation	4 632	120.00	556
		-	remains exis	-	-	-
		7 605	total	6 442		1 244
25	ADMITTING / REGISTRATION					
		1 090	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		1 090	total	-		-
26	BIOMEDICAL ENGINEERING					
		2 430	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		2 430	total	-		-

	Current Estimate (May 2002) - ***PHASE 2***					
ref #		1 Agnew FP (Apr. 24/98) area* sq. ft.		Current Estimate area* sq. ft.	cost per sq. ft.	capital (000)
14	AMB. PROCEDURES UNIT					
		7 465	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		7 465	total	-		-
15	PREADMISSION CLINIC					
		3 355	new constr	3 924	200.00	785
		-	renovation	-	-	-
		-	remains exis	-	-	-
		3 355	total	3 924		785
16	MATERNAL & NEWBORN CARE UNIT					
		34 135	new constr	31 449	280.00	8 806
		-	renovation	-	-	-
		-	remains exis	-	-	-
		34 135	total	31 449		8 806
17	PAEDIATRIC UNIT					
		12 530	new constr	-	-	-
		-	renovation	13 501	160.00	2 160
		-	remains exis	960	35.00	34
		12 530	total	14 461		2 194
18	CHILDREN'S TREATMENT CENTRE					
		16 525	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	-	-	-
		16 525	total	-		-
19	AMBULATORY CARE SERVICES					
		17 500	new constr	2 798	220.00	616
		-	renovation	1 972	140.00	276
		-	remains exis	-	-	-
		17 500	total	4 770		892
20	ALL MEDICAL / SURGICAL INPATIENT					
		89 570	new constr	-	-	-
		-	renovation	44 973	140.00	6 296
		-	remains exis	36 579	35.00	1 280
		89 570	total	81 552		7 576
21	DEPT. OF GENETICS					
		3 375	new constr	-	-	-
		-	renovation	1 937	140.00	271
		-	remains exis	-	-	-
		3 375	total	1 937		271
22	DIAGNOSTIC IMAGING					
		34 015	new constr	-	-	-
		-	renovation	19 097	220.00	4 201
		-	remains exis	-	-	-
		34 015	total	19 097		4 201
23	LABORATORY SERVICES					
		16 750	new constr	-	-	-
		-	renovation	11 068	220.00	2 435
		-	remains exis	-	-	-
		16 750	total	11 068		2 435
24	ADMINISTRATION & FINANCE					
		7 605	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exis	1 164	35.00	41
		7 605	total	1 164		41
25	ADMITTING / REGISTRATION					
		1 090	new constr	1 146	200.00	229
		-	renovation	-	-	-
		-	remains exis	-	-	-
		1 090	total	1 146		229
26	BIOMEDICAL ENGINEERING					
		2 430	new constr	1 057	180.00	190
		-	renovation	1 430	100.00	143
		-	remains exis	-	-	-
		2 430	total	2 487		333

APPENDIX VI – CAPITAL PROJECT VARIANCE TEMPLATE

Minister's Approval (June 16, 1998)

ref #		1 Agree FP (Apr. 24/98) area sq. ft		2 Func. Pgm Report area sq. ft	cost per sq. ft	[illegible] capital (000)
27	BUILDING SERVICES					
		4,120	new constr	4,120	163.00	672
		-	renovation	-	-	-
		-	remains exist	-	-	-
		4,120	total	4,120		672
28	COMMUNITY CARE ACCESS CENTRE					
		705	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exist	-	-	-
		705	total	-		-
29	EDUCATION					
		11,895	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exist	-	-	-
		11,895	total	-		-
30	FOUNDATION					
		1,100	new constr	1,100	163.00	179
		-	renovation	-	-	-
		-	remains exist	-	-	-
		1,100	total	1,100		179
31	FRENCH LANGUAGE HEALTH SERV					
		625	new constr	625	163.00	102
		-	renovation	-	-	-
		-	remains exist	-	-	-
		625	total	625		102
32	HEALTH RECORDS					
		7,120	new constr	-	-	-
		-	renovation	4,400	45.00	198
		-	remains exist	-	-	-
		7,120	total	4,400		198
33	HOUSEKEEPING					
		4,325	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exist	-	-	-
		4,325	total	-		-
34	HUMAN RES / EMPLOYEE HEALTH					
		3,905	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exist	-	-	-
		3,905	total	-		-
35	INFORMATION SYSTEMS					
		3,690	new constr	-	-	-
		-	renovation	2,220	45.00	100
		-	remains exist	-	-	-
		3,690	total	2,220		100
36	MATERIALS MANAGEMENT					
		29,510	new constr	8,561	163.00	1,395
		-	renovation	6,580	63.00	415
		-	remains exist	-	-	-
		29,510	total	15,141		1,810
37	MEDICAL STAFF FACILITIES					
		880	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exist	-	-	-
		880	total	-		-
38	NUTRITION & FOOD SERVICES					
		15,600	new constr	6,395	163.00	1,042
		-	renovation	6,490	100.00	649
		-	remains exist	-	-	-
		15,600	total	12,885		1,691
39	PASTORAL / ETHICS / MISSION EDUC					
		4,110	new constr	-	-	-
		-	renovation	-	-	-
		-	remains exist	-	-	-
		4,110	total	-		-

Sketch Plan Report (P.C.L. - April 30, 1999)

	1 Agree FP (Apr. 24/98) area sq. ft		3 Sketch Plan area sq. ft	cost per sq. ft	4 capital (000)
BUILDING SERVICES					
	4,120	new constr	5,180	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,120	total	5,180		-
COMMUNITY CARE ACCESS CENTRE					
	705	new constr	-	-	-
	-	renovation	764	-	-
	-	remains exist	-	-	-
	705	total	764		-
EDUCATION					
	11,895	new constr	8,733	-	-
	-	renovation	949	-	-
	-	remains exist	2,798	-	-
	11,895	total	12,480		-
FOUNDATION					
	1,100	new constr	1,100	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	1,100	total	1,100		-
FRENCH LANGUAGE HEALTH SERV					
	625	new constr	-	-	-
	-	renovation	625	-	-
	-	remains exist	-	-	-
	625	total	625		-
HEALTH RECORDS					
	7,120	new constr	-	-	-
	-	renovation	7,705	-	-
	-	remains exist	-	-	-
	7,120	total	7,705		-
HOUSEKEEPING					
	4,325	new constr	[illegible]	-	-
	-	renovation	1,454	-	-
	-	remains exist	-	-	-
	4,325	total	[illegible]		-
HUMAN RES / EMPLOYEE HEALTH					
	3,905	new constr	-	-	-
	-	renovation	3,905	-	-
	-	remains exist	-	-	-
	3,905	total	3,905		-
INFORMATION SYSTEMS					
	3,690	new constr	[illegible]	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	3,690	total	[illegible]		-
MATERIALS MANAGEMENT					
	29,510	new constr	12,214	-	-
	-	renovation	8,214	-	-
	-	remains exist	-	-	-
	29,510	total	20,428		-
MEDICAL STAFF FACILITIES					
	880	new constr	397	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	880	total	397		-
NUTRITION & FOOD SERVICES					
	15,600	new constr	6,014	-	-
	-	renovation	10,788	-	-
	-	remains exist	-	-	-
	15,600	total	16,802		-
PASTORAL / ETHICS / MISSION EDUC					
	4,110	new constr	2,863	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,110	total	2,863		-

Current Estimate (May 2002)

	1 Agree FP (Apr. 24/98) area sq. ft		Current Estimate area sq. ft	cost per sq. ft	capital (000)
BUILDING SERVICES					
	4,120	new constr	4,423	[illegible]	1,001
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,120	total	4,423		1,001
COMMUNITY CARE ACCESS CENTRE					
	705	new constr	-	-	-
	-	renovation	777	120.00	93
	-	remains exist	-	-	-
	705	total	777		93
EDUCATION					
	11,895	new constr	8,528	[illegible]	2,327
	-	renovation	949	160.00	152
	-	remains exist	2,798	35.00	98
	11,895	total	12,275		2,577
FOUNDATION					
	1,100	new constr	1,556	200.00	311
	-	renovation	-	-	-
	-	remains exist	-	-	-
	1,100	total	1,556		311
FRENCH LANGUAGE HEALTH SERV					
	625	new constr	-	-	-
	-	renovation	240	120.00	29
	-	remains exist	-	-	-
	625	total	240		29
HEALTH RECORDS					
	7,120	new constr	-	-	-
	-	renovation	6,267	140.00	877
	-	remains exist	-	-	-
	7,120	total	6,267		877
HOUSEKEEPING					
	4,325	new constr	1,298	380.00	493
	-	renovation	1,454	140.00	204
	-	remains exist	-	-	-
	4,325	total	2,752		697
HUMAN RES / EMPLOYEE HEALTH					
	3,905	new constr	-	-	-
	-	renovation	4,439	120.00	533
	-	remains exist	-	-	-
	3,905	total	4,439		533
INFORMATION SYSTEMS					
	3,690	new constr	1,582	330.00	522
	-	renovation	3,251	160.00	520
	-	remains exist	-	-	-
	3,690	total	4,833		1,042
MATERIALS MANAGEMENT					
	29,510	new constr	13,279	387.00	5,141
	-	renovation	8,012	140.00	1,122
	-	remains exist	7,430	35.00	260
	29,510	total	28,721		6,523
MEDICAL STAFF FACILITIES					
	880	new constr	783	381.00	298
	-	renovation	1,933	120.00	232
	-	remains exist	-	-	-
	880	total	2,716		530
NUTRITION & FOOD SERVICES					
	15,600	new constr	10,656	243.00	2,587
	-	renovation	10,788	160.00	1,726
	-	remains exist	-	-	-
	15,600	total	21,444		4,313
PASTORAL / ETHICS / MISSION EDUC					
	4,110	new constr	3,555	220.00	782
	-	renovation	-	-	-
	-	remains exist	428	25.00	11
	4,110	total	3,983		793

Current Estimate (May 2002) - PHASE 1

	1 Agree FP (Apr. 24/98) area sq. ft		Current Estimate area sq. ft	cost per sq. ft	capital (000)
BUILDING SERVICES					
	4,120	new constr	4,423	[illegible]	1,001
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,120	total	4,423		1,001
COMMUNITY CARE ACCESS CENTRE					
	705	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	705	total	-		-
EDUCATION					
	11,895	new constr	225	420.00	95
	-	renovation	-	-	-
	-	remains exist	-	-	-
	11,895	total	225		95
FOUNDATION					
	1,100	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	1,100	total	-		-
FRENCH LANGUAGE HEALTH SERV					
	625	new constr	-	-	-
	-	renovation	240	120.00	29
	-	remains exist	-	-	-
	625	total	240		29
HEALTH RECORDS					
	7,120	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	7,120	total	-		-
HOUSEKEEPING					
	4,325	new constr	1,298	380.00	493
	-	renovation	1,454	140.00	204
	-	remains exist	-	-	-
	4,325	total	2,752		697
HUMAN RES / EMPLOYEE HEALTH					
	3,905	new constr	-	-	-
	-	renovation	2,576	120.00	309
	-	remains exist	-	-	-
	3,905	total	2,576		309
INFORMATION SYSTEMS					
	3,690	new constr	856	420.00	360
	-	renovation	3,251	160.00	520
	-	remains exist	-	-	-
	3,690	total	4,107		880
MATERIALS MANAGEMENT					
	29,510	new constr	12,138	400.00	4,855
	-	renovation	6,279	140.00	879
	-	remains exist	-	-	-
	29,510	total	18,417		5,734
MEDICAL STAFF FACILITIES					
	880	new constr	783	381.00	298
	-	renovation	-	-	-
	-	remains exist	-	-	-
	880	total	783		298
NUTRITION & FOOD SERVICES					
	15,600	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	15,600	total	-		-
PASTORAL / ETHICS / MISSION EDUC					
	4,110	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,110	total	-		-

Current Estimate (May 2002) - PHASE 2

	1 Agree FP (Apr. 24/98) area sq. ft		Current Estimate area sq. ft	cost per sq. ft	capital (000)
BUILDING SERVICES					
	4,120	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,120	total	-		-
COMMUNITY CARE ACCESS CENTRE					
	705	new constr	-	-	-
	-	renovation	777	120.00	93
	-	remains exist	-	-	-
	705	total	777		93
EDUCATION					
	11,895	new constr	8,303	[illegible]	2,232
	-	renovation	949	160.00	152
	-	remains exist	2,798	35.00	98
	11,895	total	12,050		2,482
FOUNDATION					
	1,100	new constr	1,556	200.00	311
	-	renovation	-	-	-
	-	remains exist	-	-	-
	1,100	total	1,556		311
FRENCH LANGUAGE HEALTH SERV					
	625	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	625	total	-		-
HEALTH RECORDS					
	7,120	new constr	-	-	-
	-	renovation	6,267	140.00	877
	-	remains exist	-	-	-
	7,120	total	6,267		877
HOUSEKEEPING					
	4,325	new constr	-	-	-
	-	renovation	-	-	-
	-	remains exist	-	-	-
	4,325	total	-		-
HUMAN RES / EMPLOYEE HEALTH					
	3,905	new constr	-	-	-
	-	renovation	1,863	120.00	224
	-	remains exist	-	-	-
	3,905	total	1,863		224
INFORMATION SYSTEMS					
	3,690	new constr	726	[illegible]	162
	-	renovation	-	-	-
	-	remains exist	-	-	-
	3,690	total	726		162
MATERIALS MANAGEMENT					
	29,510	new constr	1,141	[illegible]	286
	-	renovation	1,733	140.00	243
	-	remains exist	7,430	35.00	260
	29,510	total	10,304		789
MEDICAL STAFF FACILITIES					
	880	new constr	-	-	-
	-	renovation	1,933	120.00	232
	-	remains exist	-	-	-
	880	total	1,933		232
NUTRITION & FOOD SERVICES					
	15,600	new constr	10,656	243.00	2,587
	-	renovation	10,788	160.00	1,726
	-	remains exist	-	-	-
	15,600	total	21,444		4,313
PASTORAL / ETHICS / MISSION EDUC					
	4,110	new constr	3,555	220.00	782
	-	renovation	-	-	-
	-	remains exist	428	25.00	11
	4,110	total	3,983		793

APPENDIX VI – CAPITAL PROJECT VARIANCE TEMPLATE

[illegible]

APPENDIX VII: DETAILED DESCRIPTION OF THE CAPITAL PROJECT OPTIONS

OPTION 1: RETAIN 1 SITE; IMPLEMENT 575 BEDS

This option represents the project as currently scoped and designed.

Description

- Retain 1 site (Ramsey)
- Retain 506 (575 approved) beds on-site (assumes 12 C & A Mental Health and T.I.L. beds remain off-site)
- Complete Phase 2 (new construction and renovations as planned)

Analysis

- As there is no change to the scope and content of the project it would be expected that the form of contract to complete the construction could change – either converting the current contract to a Guaranteed Maximum Price (GMP), or to a Stipulated Sum Contract (SSC).

Capital/Project Cost and Schedule Implications

- As the SSC approach would necessitate preparing a complete documentation of 'existing' conditions (meaning all details at the close-out of Phase I) as part of the process to preparing the tender documents, cost to complete will therefore be influenced by form of contract.
- Time to complete will be dependent on the approach to structuring/managing contract as the conversion to SSC would add several months over and above the process to convert to a GMP approach.

OPTION 2: RETAIN 1 SITE; IMPLEMENT 506 BEDS

Description

- Retain 1 site (Ramsey)
- Reduce on-site bed complement to 506 applying average cohort savings target identified in Clinical Benchmarking analysis (rather than the 'benchmark' of 25th percentile) resulting in a 69 bed reduction.
- Reduce the number of Inpatient Units and clinical services from Phase 2 new construction into North Tower – (e.g. Nephrology).

- Relocate Maternal/Newborn/NICU from Level 5 to Level 6; Paediatrics would also be moved down to Level 6, retaining the adjacency with Maternal/Newborn/NICU.
- Mental Health would relocate from Level 6, Main to Level 5 Main.
- The areas not built in this option would be 6 Main and the north extension of 6 South Tower (bed complement on this floor would remain at the currently constructed 37 rather than increasing to 40) – this reduces the area to be built by 35,609 s.f.

Analysis

- 13% reduction in bed capacity at Ramsey site
- Limited ability to reduce the size of support services already redeveloped in part or in full (e.g. kitchen, materials management), as the minor reductions that would be possible would not warrant the re-planning/re-design costs. Any minor savings in space would not be particularly useful to contribute to meeting space needs of other programs/services/departments, as the space would not likely be large enough or in a location suitable to filling such needs.
- Capital costs would be reduced as a result of less new construction.

Capital/Project Cost and Schedule Implications

- Cost reduction estimated to be $9.1 million (including 23.2% ancillary costs) based on a reduction in the amount of new space but no reduction in the extent or level of renovation.
- The lower capital cost will be partially offset by costs to redesign resulting from the changes to the project scope.
- Some additional time to complete would be expected – while the basic project approach would not change, some modifications to the design, drawings and specifications would be required.
- The form of contract for project completion at the Ramsey site could follow either the GMP or the SSC approach, as described in Option 1.

OPTION 5: USE 2 SITES, IMPLEMENT 375 BEDS

Note that this option does not reduce the target beds as a result of applying the clinical benchmarking results.

Description

- Move to 2 site Option – Ramsey site would remain the acute site; CCC, transitional/sub acute and palliative beds would be located elsewhere operated by the St. Joseph's Health Care Centre for which the options would include new construction, or renovation to an existing hospital site.

- Primary Site = 437 beds
    - 357 Acute (adult & paediatric; incl. 30 local adult)
    - 39 Mental Health
    - 41 Rehabilitation
- 2nd site = 100 beds
    - 40 CCC
    - 60 transitional (palliative)
- At the Primary site relocate inpatient units and clinical services on 5 and 6 Main from new construction into existing (e.g. Mental Health to Level 7 and a portion of Level 6, North Tower; Nephrology to Level 6, North Tower).
- Relocate Maternal Newborn (NICU) and Paediatrics as indicated in Option 2.
- The areas not built in this option would be 6 Main, 5 Main, including the south extension of the North Tower on Level 5 – this reduces the area to be built by 67,598 m2.
- This option assumes that a complete upgrade and full implementation, as is consistent with the current approach (Option 1), i.e. the programs / services and associated beds at the second location would not have to wait for upgraded facilities.

Analysis:

- 27% reduction in bed capacity at Primary site when compared to Option 1.
- Limited ability to reduce the size of those support services already redeveloped in part or in full, as was noted in Option 2.
- Diagnostic support for CCC & Transitional Care will be provided by HRSRH unless basic diagnostic services are included/retained at the second site in a cost effective manner (i.e. not generating additional costs – costs would have to replace an equal reduction in cost at the HRSRH site).
- This option creates additional operating, administrative and fixed costs as a result of operating 2 sites however, a decision by SJHC to co-locate their programs with their new Long Term Care Facility could mitigate these added costs (including capital). However, providing this role to SJHC would allow it to also explore alternate forms of serving the needs of the elderly. For example, supportive housing, multi-level care sites, hospital in the home concept etc.
- This option builds on current best practice with respect to the provision of long term and complex continuing care, and provides an opportunity to develop innovative approaches in the delivery of this specialized level of care. It also provides a potential opportunity to transfer the governance of the CCC and transitional/sub acute beds to SJHC. However, this will require detailed discussion and negotiation between the stakeholders. The fact that transitional/sub acute beds are viewed as acute beds by the MoHLTC may also add some confusion in terms of how this option might be "marketed" to the community, and the province at large.

- [illegible]
- [illegible]

Capital Project Cost and Schedule Implications

- [illegible]
- [illegible]
  - [illegible]
  - [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

OPTION [illegible]

Description

- [illegible]
- [illegible]
- [illegible]
  - [illegible]
  - [illegible]
  - [illegible]
- [illegible]

  - [illegible]
  - [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

add some confusion in terms of how this option might be "marketed" to the community, and the province at large.

- As well, while the consultants are of the opinion that this option makes common clinical sense, it is recognized that this is in contradiction to SDRC directions, and may be viewed by some in the community and the hospital as fundamentally inefficient in that it requires the operation of two sites by two distinct entities.
- As this option is based on the same assumptions about the extent and level of renovations as reflected in Option 3, cost reductions at the acute site will be more than offset by costs incurred with the development of a second site (either the renovation or new construction sub options for the second site).

Capital Project Cost and Schedule Implications

- Reduced capital cost at Ramsay site estimated at $29.6 million.
- Reduced costs at Ramsay offset by costs at second site
  - New construction option of $33.49 million
  - Renovation option of $29.56 million
- This option adds $4.76 million to $9.08 million to the cost of the project.
- Cost reductions at the acute site will be more than offset by costs incurred with the development of a second site (renovation or new construction).
- Additional time and cost will be required to develop the design and contract documents for the second site, as it would be for the modifications to the drawings and specifications for the Ramsay site.

Exhibit 1 provides a summary of the financial impact related to each option.

Exhibit 1: Financial impact related to Options 1 to 4

Option 1	No change ($63.62 million)
Option 2	$9.2 million cost reduction ($54.42 million)
Option 3	$9.69 million to $14.59 million additional costs
Option 4	$4.76 million to $9.08 million additional costs

OPTION 4 – FURTHER DISCUSSION:

Implement 306 Beds, with acute services offered at the Ramsey site, 55 CCC beds operated at another site in the short term with a view to transferring the operation and governance of this service to the SJHC, and transferring the acute care mental health program to the Algoma site of the NEMHC, including the 31 adult inpatient mental health beds.

Two sub-options were (sub-options 4A.1 and 4A.2) were developed after it became clear that significant savings were not achievable with the four options listed above. Given the significant cost overruns associated with this project, the consultants felt it was imperative that an aggressive option that would genuinely result in significant cost reduction was required. Other communities involved in HSRC directed projects that are over scope and over budget are directed by the MoHLTC to:

- Reconceptualize the plan to deal directly with the HSRC capital elements only; and
- Rescope the capital development approach to reduce the capital cost overrun: e.g. eliminate renovations to areas that are already in use for like functions (i.e. no renovations for the sole purpose of meeting current industry standards – this is considered as a subsequent submission and negotiated with MoHLTC once HSRC is implemented); reduce the extent of renovation to reuse as much space as possible in its' existing state, yet achieving some degree of functionality.

Application of these principles to create a new option results in:

- Using what is available now in terms of new construction, finishing off the space that will be in a shelled state at the completion of Phase 1 and eliminating/reducing further new construction (i.e. adding space only to the extent that it provides for a new main entrance and code/circulation needs);
- Reducing scope/extent of renovations within current building – eliminate some altogether at this stage; and
- Leaving additional items that now form part of the capital project, and pursuing these at some future date through other negotiations as part of the MoHLTC's standard capital planning process.

Description

This option involves 2 sub-options, although both start from the position of modifying the target beds, in keeping with the findings from the utilization/benchmarking review. Options 4A.1 and 4A.2 are described below.

There will be a requirement for additional discussions and agreements between HRSRH and the MoHLTC about the implementation of these options, timing and other such details. As well, stakeholders such as SJHC and the Northeastern Mental Health Implementation Task Force and the NEMHC should be involved. These implementation assumptions and details do not form part of the Capital Analysis portion of the Operational Review.

Option 4A.1

- Option 4A.1 will be identical to Option 4A.2 with the exception that it WILL NOT include the additional line items based on the consolidation of the acute care services at Ramsey site, will include the bed reduction targets identified through the utilization review and will include the costs associated with:
  - An at-grade helicopter Landing Pad (alternates of the pad being on top of north tower or a possible parkade to create the at-grade pad will not be carried within this option);
  - No vertical growth of the 'center' tower (Level 3 will be the uppermost floor in this option);
  - The acute mental health bed space program (31 beds plus related non-bed space) will be assumed to be located off-site at 18,685 s.f. component gross; (38 programmed beds have been pro-rated to reflect the downsizing to 31 beds as a result of the utilization review) but will not generate costs as this program is assumed to be housed within space already available; and
  - The long term approach to housing the complex continuing care program will be excluded from the model; however, an allowance for minor facility modifications for a relocation of the CCC Program into a transitional site will be included.

Other features of Option 4A.1 include:

- Relocate Medical Day Care from Main (new) into North Tower (minimal renovations) and, in order to meet the currently proposed 390 beds on-site, co-locate 22 medical inpatient beds with this unit, other functions would be included on Level 7 in order to make full use of the facility.
- One clinical service would be split between floors in North Tower – NICU with Paediatrics on Level 4, Obstetrics directly above on Level 5.
- Nephrology remains in North Tower – occupies the entire 6th floor with limited renovations and improvements in mandated life safety elements.
- Eliminate the new construction planned for 6 Main, 5 Main, 4 Main, and portions of 3 Main – 3 Main will require a modest amount of new construction in order to provide elevator access to the ICU and to create the Cardiovascular Investigation Unit – functions currently on this floor such as SJHC Administration would be eliminated, although space currently earmarked for functions now not needed would be available to transfer other functions into from other Phase 2 locations.

- Due to reduced activity at this site, the new main entrance will be redesigned and reduced to the greatest extent possible; as noted above, SJHC-specific components can be eliminated (e.g. administration, chapel).
- The Heliport currently planned for the roof of the North Tower would be provided at significantly less cost at ground level.
- Children's Treatment Centre would need to be in new construction unless ongoing work at further bed utilization reduction identifies additional bed savings – this model is at the verge of being able to eliminate the need to build the Children's Treatment Centre in new space (as per Option 4) through the relocation into the main hospital of the 31 Rehabilitation beds from the Wing.
- Other adjustments to area allocations would occur due to reduced volumes and alternate approaches to accessing/sharing spaces (e.g. reducing the amount of cafeteria seating).

Option 4A.2

- Option 4A.2 will be identical to Option 4A.1 with the exception that it will include the alternate costs associated with:
    - helicopter Landing Pad (on top of north tower or required parkade);
    - vertical growth of the 'centre' tower;
    - mental health bed space (31 beds plus related non-bed space) assumed at 18,685 s.f. component gross or (21,500 s.f. floor plate area); Note that the space for the 38-bed program has been pro-rated to reflect the downsizing to 31 beds as a result of the utilization review;
    - complex continuing care program; 2 costs will be carried in this options: the estimated space and an associated capital cost allowance for renovations to relocate into transitional space (interim location that can provide 51,000 – 55,000 component gross square feet) and the estimated capital cost for its final location, assumed to be in new construction, based on a model that co-locates these 85 beds with a Long Term Care Facility (assumed to be 75,000 building gross square feet); With respect to the Complex Continuing Care Program, it is assumed that diagnostic infrastructure will be provided as follows:
        - diagnostic imaging in support of the 85 inpatients (general x-ray) will be available, in the short term, though the ongoing use of 1 general x-ray unit for this program, assume DI already exists at the interim location; in the long term, assuming that the program is moved to a location that does not already have on-site imaging facilities, it is assumed that access to imaging would be through the transfer of patients to the acute care site;
        - clinical lab services for these inpatients are assumed to be available by having specimens taken by nursing staff working in the CCC Program, with analysis either being by point-of-care testing and/or the main labs at HRSRH, the exact nature of which may be determined from time-to-time by 'Business Case' analysis.
- Reduction in acute care capacity to 390 beds.

- Planning is refocused on the HSRC capital elements, to the greatest degree possible recognizing that Phase 1 is complete.
- The original scope of Phase 2 is being significantly altered, and as a result the remaining construction at the HRSH must be redefined, requiring functional programming at a high level (an abridged document that focuses on revised projections workload, staffing and sp ace) and redesign – it is assumed that both re-planning steps will necessitate a very limited user-input approach in order to minimize re-planning time).
- Construction unit rates used in developing the 'estimated cost to complete' will be based on July 2002 dollars and the usual MoHLTC's approach of adjusting the capital approval, based on the actual escalation experienced in the industry, will be applied similarly for this project.
- The reduction in the amount and cost of new construction will be maximized. This will be done by reducing the space designated as new construction in order to reflect the reduction in overall bed capacity at this site – this may necessitate elements previously identified for accommodation in new construction to be re-assigned to space within existing space (see also Item 9 below).
- The reduction in the cost of renovations will be maximized. For example, if a space is being used for a specific function and a similar function will be placed into the designated space, renovations should not be required or will be minimized to 'light renovation' category and/or life safety upgrade. In addition, programs which remain in existing space will have no renovation cost assigned.
- Design elements that do not contribute functionally to the final building will be significantly reduced or eliminated.
- As there will be services already constructed in Phase 1 that will be over-sized in relation to the reduced scope and bed complement at this site, it is assumed that some functions currently identified for Phase 2, new space, may be assumed to be relocated into such un-needed space already built.

Functions which can be operationalized using an alternate approach (where this alternate approach reduces the space of the total project), will be assumed to be implemented according to this alternate, and space identified in the current plan will either be eliminated or reassigned to allow other project reductions (e.g. the staff fitness function will be assumed to occur within the rehabilitation area at times when not used for patient services, thereby allowing its space to be eliminated from Phase 2 new construction).

Exhibit 2 summarizes the proposal to re-locate beds for specific programs/services and the resulting number of beds by program/service remaining at the Ramsey Road site:

Exhibit 2: Proposed location of beds for specific programs/services

Program	*Target (Revised)*	*HRSRH*	*SJHC*	*Northeast Mental Health (Algoma)*
Orthopaedics	26	26		
Neurosurgery	9	9		
Cardiac Services	44	44		
Other Medical/Surgical	223	223		
Obstetrics	26	26		
Neonatal Intensive Care [1]	(27)	(27)		
Mental Health	31			31
Complex Contin'g Care	85		85	
Rehabilitation	62	62		
TOTAL	***506***	***390***	***85***	***31***

Finally, this option has been based on the principle that areas will receive the least amount of renovation possible that allows the future functions to be located therein. Thus, areas that were identified for renovation have been reviewed to determine what alternate approach can be used that provides for some degree of functionality at a reduced capital cost. This cost-reduction strategy applies similarly to the programs/services moved to off-site locations.

Analysis

- Significant reduction in bed capacity at Ramsey site (33% from the current planned capacity of 586 beds).
- No reduction in space for high cost acute patient care services (DI, Surgical Suite) as acute care remains consolidated at this site.
- This option creates some additional operating, administrative and hotel costs as a result of operating 2 sites; however, a decision by SJHC to co-locate their programs with their new Long Term Care Facility could mitigate these added costs (including capital); however, providing this role to SJHC would allow it to also explore alternate forms of serving the needs of the elderly. For example, supportive housing, multi-level care sites, hospital in the home concept etc.

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[1] Neonatal Intensive Care beds are shown in brackets ( ) as these area excluded from the total, as they are not considered part of the rated bed count.

- Diagnostic support for CCC and Mental Health will be provided by HRSRH unless basic diagnostic services are included/retained at these other sites in a cost-effective manner (i.e. not generating additional costs – costs would have to replace an equal reduction in cost at the HSRSH site).
- There is the ability to reduce amount and/or level of renovations.

Capital/Project Cost and Schedule Implications

- In relation to Option 1, this option may allow the earlier consolidation of acute care services, although there will be additional time required prior to restart of construction/ renovation in order to redesign some areas – this additional time may make any overall time savings negligible.

APPENDIX VIII: COHORT HOSPITAL SELECTION SCORING TABLE

Hosp Acronym	Size	Tertiary	Teaching	Composite	Multi-Site	Sole Provider
HRSRH	1	1	1	1	25	25
Humber	8	10	10	9	25	0
Grand River	9	19	9	12	0	25
Windsor HDG	15	5	18	13	25	25
Lakeridge	7	24	7	13	25	0
Rouge Val	2	21	16	13	25	0
St Jos - Ham	6	2	33	14	0	0
Thunder Bay	16	4	22	14	25	25
Trillium	10	13	20	14	25	0
Jos Brant	29	12	4	15	0	0
Peterbor Civ	20	14	13	16	25	25
Tor East Gen	12	6	29	16	0	0
NY Gen	3	20	28	17	0	0
William Os	14	25	12	17	25	0
St Cath Gen	38	8	8	18	0	0
Credit Val	22	30	2	18	0	0
Mt Sinai	11	3	40	18	0	0
York County	27	17	11	18	0	0
Brantford	34	16	6	19	0	25
St Jos - Tor	17	9	30	19	0	0
St Jos - Lon	4	23	31	19	0	25
Sault Area	30	27	3	20	25	25
Qnswy Carlt	35	7	19	20	0	0
York Central	31	11	22	21	0	0
Royal Vic	28	22	15	22	0	25
SWCHSC	19	15	32	22	25	0
Windsor Reg	21	29	21	24	25	25
Quinte	32	36	5	24	25	25
Oakville	26	35	14	25	0	0
Kingston Gen	5	34	38	26	25	25
Ottawa	25	18	34	26	25	0
St. Mike	13	32	37	27	0	0
Grey Bruce	33	33	17	28	25	25
Sarnia	36	26	22	28	0	25
Ham HSC	24	28	35	29	25	0
North Bay	37	31	22	30	25	25
Lon HSC	18	37	39	31	25	25
UHN	23	40	36	33	25	0

APPENDIX IX:
EVALUATION OF CHART DOCUMENTATION QUALITY
(FROM THE RETROSPECTIVE REVIEW)

Documentation Form	Excellent Practices	Opportunities for Improvement
Health Records Face Sheet	– Demographic data easy to audit – Most Responsible Physician (MRP) identified – Discharge date and time was completed fairly well – Total LOS completed well. – Allergies section completed fairly well. – Disciplines involved with the care were identified in the therapies section, i.e. PT, OT.	– Revisit the Admission/Registration process of patients admitted through the ED. The Admit date not always accurate. The documented time of admission on the Face sheet was later than the Admission order by the Physician and later than the actual time of admission to the unit on some charts. – Admit date, time, account number and room number not documented well on elective "SDA" patients. – Physician section including most responsible Dx, Co-morbidity, Procedures, etc. not completed well. – Discharge disposition and "ALC" section could be added. – Patients transferred from other facilities not always captured on this form consistently and not captured by Health Records. – Signature of the Attending Physician not always present.
Emergency Face Sheet	– Registration date and time complete. – BEC Emergency Systems forms used by nursing and medicine. – Triage level and mode of transportation documented well. – Allergies and Meds sections completed well. – Admission history and physical by physicians	– Triage nursing signature completed but nursing signature not found on bottom of this form. – The disposition and transfer section not completed on the majority of charts. – Limited nursing documentation on these records. – Times of Triage reassessment, room placement and discharge not recorded consistently.

Appendix IX: Evaluation Of Chart Documentation Quality (From The Retrospective Review)

Documentation Form	Excellent Practices	Opportunities for Improvement
	completed well, generally dictated.	– Admission time to hospital difficult to assess. It is not documented well. – Documentation by Crisis Team for Psychiatry patients not found on charts
Emergency Department Nursing Documentation	– Nursing progress notes complete with time of transfer from ER and disposition. – Vital signs and neuro signs documented fairly consistently on the Emergency Clinical record.	– Nursing assessments could be more detailed with the head to toe assessment/analysis. – Emergency Clinical record was not always dated. – May wish to consider a high risk screening tool in the Emergency Department to enable discharge planning initiatives earlier.
Physician's History and Physical	– Dictated day of admission and on most charts.	– ED Physician's History and Physical not always found on chart. – May take 1-2 days for Psychiatrists to complete the History and Physical.
Physician Consults	– Consults generally written/dictated within 24 hours of consult request.	
Discharge Summary	– Dictated and on charts.	– Dictated 1 day to 6 months post discharge. – Summary was very brief in some cases and did not always describe the hospital events well.
Doctor's Order Form	– Transfer of care for MRP documented well. – Allergy stamp on majority of charts when appropriate. – Records were stamped with patient's addressograph on majority of charts. – Admit sticker found on majority of charts. – Pre-printed pre op and post op orders for Caesarian section dated, timed, and signed consistently.	– The appropriate site was not checked at top of page. – Dating and timing of orders not completed well on many charts. Some orders were not dated. – Admit sticker not completed well with date, time, and Diagnosis. On several charts the admit date on the sticker was the day before the admit date on the Face sheet. – Physician signatures were not always complete on

Appendix IX: Evaluation Of Chart Documentation Quality (From The Retrospective Review)

Documentation Form	Excellent Practices	Opportunities for Improvement
	▪ Mental Health orders dated and timed well	verbal/telephone orders ▪ Processing of orders not done well - the date and time of transcription not recorded on many charts and there was no signature indicating transcription was done. ▪ Telephone / verbal orders were not always signed by the Physician. ▪ Pre-printed orders were not always dated and timed.
Physician Progress Notes	▪ Generally physicians documented quite frequently about the patient's condition ▪ Some dictated progress notes on charts dictated and transcribed same day	▪ Some documentation was not dated or timed ▪ Some of the acute patients lacked documentation re plans for discharge. In the review, these patients were responsible for many of the undesignated ALC days and potentially avoidable days. ▪ Some documentation was illegible.
Multidisciplinary Progress Notes	▪ Home Care involvement timely following referral ▪ CCAC Service request / Treatment Orders form completed fairly well by the Physician ▪ CCAC was generally requested the day prior to or the day of discharge ▪ Most progress notes were dated but not always timed ▪ Discharge Instruction record completed well and on most charts ▪ Physiotherapy / Occupational Therapy, Speech Therapy, etc. documented their initial assessments and plan of action well ▪ Physiotherapy and Occupational Services Discharge Summary completed well ▪ Psychiatry – Interdisciplinary Problem Sheet completed fairly well. Tentative discharge date not completed ▪ Excellent documentation by Nutrition services, Pastoral Care and Respiratory Therapists	▪ However, there was no clear documentation of Home Care services patient would receive and the start date post discharge. ▪ The bottom section of the Service Request form not completed well by CCAC. First visit date and time not stated and Intake CM not always signed and dated. ▪ There was little follow up documentation of the progress of the patient on a regular basis by PT, OT, SLP, and SW. Often the next documentation was several days later or on the discharge summary. ▪ In many cases the Speech therapist never saw the patient as it was documented the patient was put on a "wait list of first come first serve" basis. ▪ The wait for Occupational therapy was also evident as it was documented on several charts that due to workload the assessment of the patient would be delayed. ▪ In some cases there was no documentation by the Social Worker after being consulted re discharge planning.

Appendix IX: Evaluation Of Chart Documentation Quality (From The Retrospective Review)

Documentation Form	Excellent Practices	Opportunities for Improvement
		☐ There was a lack of discharge planning documentation from all disciplines. There was no evidence of routine discharge planning. ☐ A multidisciplinary discharge planning section could be developed to incorporate and note all activities around the subject of discharge planning from all disciplines. ☐ Psychiatry weekly conference documented but lacked discharge planning documentation. ☐ Record of request for service form not completed well by PT, OT, and SW
ALC Identification	☐ There were designated ALC days noted for LTC. ☐ The ALC form was used fairly well.	☐ ALC designation was not completed well when it was documented that the patient was waiting for a Chronic Care or Rehab bed and the appropriate forms had been faxed. ☐ ALC designation, written on the ALC form was not always coded in Health Records. ☐ When ALC status was identified, the discharge planning process was unclear and ☐ Documentation could take several more days before the appropriate papers were completed and faxed. It was not always documented whether papers had been faxed and when the discharge plan was. ☐ Patients waiting Palliative Care were not designated ALC.
Nursing Documentation	☐ Nursing Histories for patients coming through the Pre-Admit Clinic were completed well. ☐ Clinical Activity Records timed and completed fairly well. ☐ The time the patient was admitted to the ward from ED was documented well. ☐ Medication records completed well.	☐ Nursing Histories and Plan of Care not found on admission consistently and not completed well on patients admitted through ED. ☐ Several different Nursing History and Assessment forms used – 1-page history in Pre-Admission Clinic and 6 pages on units. ☐ Fluid balance flow sheets were not complete. Intake/output balance not recorded consistently. ☐ Nursing Progress notes not always timed and some were dated incorrectly.

Appendix IX: Evaluation Of Chart Documentation Quality (From The Retrospective Review)

Documentation Area	Excellent Practice	Opportunities for Improvement
		☐ [illegible]
Perioperative Nursing Documentation	☐ Nursing OR checklist completed well ☐ PACU nurses notes completed well with appropriate documentation of [illegible] ☐ Operating Room nurses' notes were complete and thorough with appropriate signatures ☐ Anesthesia Record completed well	☐ Time of transfer out of PACU not always recorded
Post Procedure Report		☐ [illegible] ☐ [illegible] ☐ [illegible]
Surgery	☐ Clinical Pathway for Total Knee Replacement completed well ☐ The use of clinical pathways could potentially decrease [illegible]	☐ Only TKR Clinical Pathway ☐ [illegible] ☐ [illegible]
Ambulance Record	☐ Completed well on patients brought in from home or other facilities	☐ [illegible]
Universal Chart Order		☐ [illegible] ☐ [illegible] ☐ [illegible]

APPENDIX [illegible]: DETAILED CLINICAL EFFICIENCY BENCHMARKING RESULTS FOR PROGRAMS NOT SPECIFICALLY IDENTIFIED FOR OPERATIONAL EFFICIENCIES

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Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

DENTAL/ORAL SURGERY

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRHRV in brackets)
    - Dental/Oral Surgery: 678 cases (1.3%) and 184 (0.1%) days
- Trends
    - Dental/Oral Surgery: Volume increased over last four years. ALOS steady at 0.3 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets)
    - Dental/Oral Surgery: none at ELOS or at benchmark

Exhibit 2 Dental/Oral Surgery CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	208	540	676	678
*Average LOS	0.3	0.3	0.3	0.3
Expected LOS	0.3	0.3	0.3	0.3
Benchmark LOS	0.3	0.3	0.3	0.3
Total Days	57	155	187	184
Expected Days	62	162	198	191
Benchmark Days	57	148	180	181
Conservable Bed Days to Expected	-5	-8	-11	-7
Equivalent Beds at 85% Occupancy	0.0	0.0	0.0	0.0
Percent Conservable Days to Expected	-8%	-5%	-6%	-4%
Conservable Bed Days to Benchmark	0	7	6	3
Equivalent Beds at 85% Occupancy	0.0	0.0	0.0	0.0
Percent Conservable Days to Benchmark	1%	5%	3%	2%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

DERMATOLOGY

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRSRH in brackets):
  - Dermatology: 294 cases (0.7%) and 567 (0.4%) days
- Trends:
  - Dermatology: Volume increased over last four years. ALOS decreased from 2.5 days in 1997/98 to 1.9 days in 2000/01.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - Dermatology: less than 1 bed at ELOS and at benchmark

Exhibit 1 Dermatology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	94	209	248	294
*Average LOS	2.5	2.4	1.3	1.9
Expected LOS	1.6	1.5	1.1	1.7
Benchmark LOS	1.2	1.0	0.8	1.2
Total Days	234	507	327	567
Expected Days	154	309	285	494
Benchmark Days	115	212	200	356
Conservable Bed Days to Expected	80	198	42	73
Equivalent Beds at 85% Occupancy	0.3	0.6	0.1	0.2
Percent Conservable Days to Expected	34%	39%	13%	13%
Conservable Bed Days to Benchmark	119	295	127	211
Equivalent Beds at 85% Occupancy	0.4	1.0	0.4	0.7
Percent Conservable Days to Benchmark	51%	58%	39%	37%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

ENDOCRINOLOGY

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
  - **Endocrinology: 1,709 cases (3.9%) and 2,403 (1.8%) days**
- Trends:
  - **Endocrinology: Volume increases over last four years. ALOS fluctuating between 1.1 and 1.6 days.**
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - **Endocrinology: none at ELOS, 2.9 (38%) at benchmark**

Exhibit 4 Endocrinology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	1,550	1,625	1,747	1,709
*Average LOS	1.6	1.3	1.1	1.4
Expected LOS	2.1	1.6	1.6	1.6
Benchmark LOS	1.2	0.9	0.9	0.9
Total Days	2,551	2,130	1,980	2,403
Expected Days	3,300	2,651	2,726	2,747
Benchmark Days	1,792	1,434	1,547	1,498
Conservable Bed Days to Expected	-750	-521	-746	-343
Equivalent Beds at 85% Occupancy	-2.4	-1.7	-2.4	-1.1
Percent Conservable Days to Expected	-29%	-24%	-38%	-14%
Conservable Bed Days to Benchmark	759	696	433	905
Equivalent Beds at 85% Occupancy	2.4	2.2	1.4	2.9
Percent Conservable Days to Benchmark	30%	33%	22%	38%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

GENERAL MEDICINE

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
  - General Medicine : 938 cases (2.1%) and 3,370 (2.5%) days
- Trends:
  - General Medicine : Volume and has remained steady over last four years with a noticeable dip in 1998/99. ALOS has decreased from 4.7 to 3.6 days over that time.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - General Medicine : 0.9 (8%) at ELOS, 3.3 (31%) at benchmark

Exhibit 5 General Medicine CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	915	810	939	938
*Average LOS	4.7	4.3	4.0	3.6
Expected LOS	3.9	3.9	3.7	3.3
Benchmark LOS	3.0	2.8	2.8	2.4
Total Days	4,286	3,485	3,777	3,333
Expected Days	3,559	3,132	3,471	3,057
Benchmark Days	2,753	2,248	2,634	2,295
Conservable Bed Days to Expected	728	353	306	276
Equivalent Beds at 85% Occupancy	2.3	1.1	1.0	0.9
Percent Conservable Days to Expected	17%	10%	8%	8%
Conservable Bed Days to Benchmark	1533	1237	1143	1038
Equivalent Beds at 85% Occupancy	4.9	4.0	3.7	3.3
Percent Conservable Days to Benchmark	36%	35%	30%	31%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

GYNAECOLOGY

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
  - Gynaecology: 2,258 cases (5.1%) and 3,370 (2.6%) days
- Trends:
  - Gynaecology: Volume increases in 1998/99 and has remained steady over last three years. ALOS has decreased from 1.9 to 1.5 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - Gynaecology: 2.6 (24%) at ELOS, 3.0 (27%) at benchmark

Exhibit 6 Gynaecology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	2,036	2,252	2,131	2,258
*Average LOS	1.9	1.9	1.7	1.5
Expected LOS	1.5	1.5	1.3	1.1
Benchmark LOS	1.5	1.4	1.3	1.1
Total Days	3,791	4,257	3,721	3,370
Expected Days	3,073	3,321	2,775	2,569
Benchmark Days	3,141	3,242	2,686	2,448
Conservable Bed Days to Expected	718	935	946	800
Equivalent Beds at 85% Occupancy	2.3	3.0	3.0	2.6
Percent Conservable Days to Expected	19%	22%	25%	24%
Conservable Bed Days to Benchmark	650	1014	1035	922
Equivalent Beds at 85% Occupancy	2.1	3.3	3.3	3.0
Percent Conservable Days to Benchmark	17%	24%	28%	27%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

HAEMATOLOGY

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
  - **Haematology:** 428 cases (1.0%) and 1,009 (0.8%) days
- Trends:
  - **Haematology:** Volume increases over last four years. ALOS fluctuating between 2.1 and 3.2 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - **Haematology:** none at ELOS, 1.1 (34%) at benchmark

Exhibit 7 Haematology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	292	328	449	428
*Average LOS	3.2	2.9	2.1	2.4
Expected LOS	3.3	3.0	2.3	2.3
Benchmark LOS	2.6	2.2	1.6	1.5
Total Days	922	963	947	1,009
Expected Days	960	993	1,052	979
Benchmark Days	772	733	715	662
Conservable Bed Days to Expected	-39	-30	-105	30
Equivalent Beds at 85% Occupancy	-0.1	-0.1	-0.3	0.1
Percent Conservable Days to Expected	-4%	-3%	-11%	3%
Conservable Bed Days to Benchmark	149	231	232	347
Equivalent Beds at 85% Occupancy	0.5	0.7	0.7	1.1
Percent Conservable Days to Benchmark	16%	24%	25%	34%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

NEONATOLOGY

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
    - **Neonatology: 587 cases (1.3%) and 3,490 (2.7%) days**
- Trends:
    - **Neonatology: Volume declined over last four years. ALOS fluctuating around 5.9 days.**
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
    - **Neonatology: 1.2 (11%) at ELOS, 1.8 (16%) at benchmark**

Exhibit 8 Neonatology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	788	723	594	587
*Average LOS	5.9	5.3	6.0	5.9
Expected LOS	5.1	4.8	5.6	5.3
Benchmark LOS	4.6	4.0	4.9	5.0
Total Days	4,645	3,830	3,538	3,490
Expected Days	4,031	3,467	3,341	3,121
Benchmark Days	3,642	2,904	2,899	2,938
Conservable Bed Days to Expected	614	363	197	369
Equivalent Beds at 85% Occupancy	2.0	1.2	0.6	1.2
Percent Conservable Days to Expected	13%	9%	6%	11%
Conservable Bed Days to Benchmark	1003	927	639	552
Equivalent Beds at 85% Occupancy	3.2	3.0	2.1	1.8
Percent Conservable Days to Benchmark	22%	24%	18%	16%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

NEPHROLOGY

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
  - **Nephrology:** 180 cases (0.4%) and 982 (0.7%) days
- Trends:
  - **Nephrology:** Volume dropped between 1997/98 and 1998/99 but has increases in 2000/01. ALOS fluctuating between 5.2 and 6.3 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - **Nephrology:** less than 1 (23%) at ELOS, 1.3 (42%) at benchmark

Exhibit 9 Nephrology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	202	169	161	180
*Average LOS	5.2	6.3	5.8	5.5
Expected LOS	5.2	4.9	5.1	4.2
Benchmark LOS	4.3	3.9	4.0	3.1
Total Days	1,058	1,062	929	982
Expected Days	1,055	827	814	758
Benchmark Days	862	667	640	565
Conservable Bed Days to Expected	3	234	115	223
Equivalent Beds at 85% Occupancy	0.0	0.8	0.4	0.7
Percent Conservable Days to Expected	0%	22%	12%	23%
Conservable Bed Days to Benchmark	196	395	289	416
Equivalent Beds at 85% Occupancy	0.6	1.3	0.9	1.3
Percent Conservable Days to Benchmark	18%	37%	31%	42%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

NEUROSURGERY

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets):
    - Neurosurgery: 852 cases (1.9%) and 2,853 (2.2%) days
- Trends:
    - Neurosurgery: Volume increases over last four years. ALOS fluctuating around 3.4 days with an increase in 1998/99 to 4.5 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
    - Neurosurgery: 3.2 (35%) at ELOS, 4.4 (48%) at benchmark

Exhibit 10 Neurosurgery CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	704	711	716	852
*Average LOS	3.5	4.5	3.4	3.3
Expected LOS	2.5	2.5	2.4	2.2
Benchmark LOS	2.0	2.0	1.8	1.8
Total Days	2,442	3,204	2,405	2,853
Expected Days	1,779	1,804	1,720	1,865
Benchmark Days	1,384	1,441	1,302	1,497
Conservable Bed Days to Expected	663	1399	685	988
Equivalent Beds at 85% Occupancy	2.1	4.5	2.2	3.2
Percent Conservable Days to Expected	27%	44%	28%	35%
Conservable Bed Days to Benchmark	1059	1763	1103	1356
Equivalent Beds at 85% Occupancy	3.4	5.7	3.5	4.4
Percent Conservable Days to Benchmark	43%	55%	46%	48%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

NORMAL NEWBORN

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HHSRH in brackets):
  - **Normal Newborns:** 1,091 cases (2.5%) and 2,145 (1.6%) days
- Trends:
  - **Normal Newborns:** Volume declined over last four years. ALOS fluctuating around 2.0 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - **Normal Newborns:** 1.0 (14%) at ELOS, 1.5 (21%) at benchmark

Exhibit 19 Normal Newborn CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	1,313	1,280	1,240	1,091
*Average LOS	2.1	2.0	2.0	2.0
Expected LOS	1.6	1.6	1.6	1.7
Benchmark LOS	1.4	1.3	1.4	1.5
Total Days	2,715	2,522	2,478	2,145
Expected Days	2,164	1,986	2,034	1,847
Benchmark Days	1,804	1,649	1,755	1,686
Conservable Bed Days to Expected	551	536	444	298
Equivalent Beds at 85% Occupancy	1.8	1.8	1.4	1.0
Percent Conservable Days to Expected	20%	22%	18%	14%
Conservable Bed Days to Benchmark	911	873	723	459
Equivalent Beds at 85% Occupancy	2.9	2.8	2.3	1.5
Percent Conservable Days to Benchmark	34%	35%	29%	21%

*Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

OBSTETRICS

BENCHMARKING ANALYSIS:

- Volumes in 2000/01 (% of HRSRH in brackets)
    - **Obstetrics:** 2,462 cases (5.6%) and 5,095 (5.9%) days
- Trends
    - **Obstetrics:** Volumes declined over last four years. ALOS fluctuating around 2.1 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets)
    - **Obstetrics:** 1.7 (10%) at ELOS, 2.8 (17%) at benchmark

Exhibit 12 Obstetrics CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	3,399	2,960	2,810	2,462
¹Average LOS	2.1	2.2	2.1	2.1
Expected LOS	1.8	1.8	1.8	1.9
Benchmark LOS	1.6	1.6	1.6	1.7
Total Days	7,069	6,479	6,046	5,095
Expected Days	5,996	5,346	5,096	4,563
Benchmark Days	5,272	4,613	4,332	4,209
Conservable Bed Days vs Expected	1073	1133	948	532
Equivalent Beds at 85% Occupancy	3.5	4.0	3.1	1.7
Percent Conservable Days vs Expected	15%	18%	16%	10%
Conservable Bed Days vs Benchmark	1797	1867	1714	886
Equivalent Beds at 85% Occupancy	5.8	6.0	5.5	2.8
Percent Conservable Days vs Benchmark	25%	29%	28%	17%

¹Day surgery cases counted as 0.25 days per case

Appendix V: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

OPHTHALMOLOGY

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of [illegible] in brackets)
  - **Ophthalmology:** [illegible] cases ([illegible]) and [illegible] ([illegible]) days
- Trends
  - **Ophthalmology:** Volume increased over last four years. ALOS remained steady at [illegible] days.
- Conservable Beds in 2000/01 (% of total Program Beds in brackets)
  - **Ophthalmology:** [illegible] ([illegible]), or at Benchmark

Exhibit [illegible]: Ophthalmology CMG Program Cases

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	[illegible]	[illegible]	[illegible]	[illegible]
¹Average LOS	[illegible]	[illegible]	[illegible]	[illegible]
Expected LOS	[illegible]	[illegible]	[illegible]	[illegible]
Benchmark LOS	[illegible]	[illegible]	[illegible]	[illegible]
Total Days	[illegible]	[illegible]	[illegible]	[illegible]
Expected Days	[illegible]	[illegible]	[illegible]	[illegible]
Benchmark Days	[illegible]	[illegible]	[illegible]	[illegible]
Conservable Bed Days to Expected	[illegible]	[illegible]	[illegible]	[illegible]
Equivalent Beds at 85% Occupancy	[illegible]	[illegible]	[illegible]	[illegible]
Percent Conservable Days to Expected	[illegible]	[illegible]	[illegible]	[illegible]
Conservable Bed Days to Benchmark	[illegible]	[illegible]	[illegible]	[illegible]
Equivalent Beds at 85% Occupancy	[illegible]	[illegible]	[illegible]	[illegible]
Percent Conservable Days to Benchmark	[illegible]	[illegible]	[illegible]	[illegible]

¹ Day surgery cases counted as [illegible] days per case

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Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

RHEUMATOLOGY

BENCHMARKING SUMMARY

- Volumes in 2000/01 (% of HRHRA in brackets)
  - *Rheumatology*: 63 cases (0.1%) and 495 (0.4%) days
- Trends
  - *Rheumatology*: Volume remained flat over last four years. ALOS fluctuated from over 7 days in each year with an exception in 1999/00 of 5.9 days.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets)
  - *Rheumatology*: less than 1 at ELOS and at benchmark

Exhibit 16 Rheumatology CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	68	79	63	63
¹Average LOS	7.3	8.5	5.9	7.9
Expected LOS	7.0	7.3	6.7	5.3
Benchmark LOS	5.7	5.2	5.2	4.2
Total Days	498	665	359	495
Expected Days	475	569	407	333
Benchmark Days	391	403	316	266
Conservable Bed Days to Expected	23	96	-48	162
Equivalent Beds at 85% Occupancy	0.1	0.3	-0.2	0.5
Percent Conservable Days to Expected	4%	14%	-13%	33%
Conservable Bed Days to Benchmark	107	262	43	229
Equivalent Beds at 85% Occupancy	0.3	0.8	0.1	0.7
Percent Conservable Days to Benchmark	22%	39%	12%	46%

¹Day surgery cases counted as 0.25 days per case

Appendix X: Detailed Clinical Efficiency Benchmarking Results for Programs Not Specifically Identified for Operational Efficiencies

VASCULAR SURGERY

BENCHMARKING ANALYSIS

- Volumes in 2000/01 (% of HRRH in brackets):
  - Vascular Surgery: 420 cases (0.9%) and 3,177 (2.4%) days
- Trends:
  - Vascular Surgery: Volume increases over last four years. ALOS dropped from 9.2 days in 1997/98 to 5.8 in 1998/99 but has increased over the past two years to 7.6 days in 2000/01.
- Conservable Beds in 2000/01 (% of total Program Cluster beds in brackets):
  - Vascular Surgery: 1.3 (13%) at ELOS, 3.1 (30%) at benchmark

Exhibit 17 Vascular Surgery CMG Program Cluster

	Year			
Data	97/98	98/99	99/00	00/01
Inpatient & Day Surgery Cases	377	380	417	420
*Average LOS	9.2	5.8	6.0	7.6
Expected LOS	7.2	5.9	5.5	6.6
Benchmark LOS	5.8	4.8	4.1	5.3
Total Days	3,453	2,217	2,498	3,177
Expected Days	2,709	2,237	2,297	2,778
Benchmark Days	2,205	1,808	1,725	2,225
Conservable Bed Days to Expected	744	-21	201	398
Equivalent Beds at 85% Occupancy	2.4	-0.1	0.6	1.3
Percent Conservable Days to Expected	22%	-1%	8%	13%
Conservable Bed Days to Benchmark	1247	409	773	951
Equivalent Beds at 85% Occupancy	4.0	1.3	2.5	3.1
Percent Conservable Days to Benchmark	36%	18%	31%	30%

*Day surgery cases counted as 0.25 days per case

APPENDIX XI: DETAILED FINANCIAL BENCHMARKING RESULTS

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High Level trend Analysis

Trends in Total Expenses

Exhibit 1: Trends in Total Expenses (1997/98 to 2000/01 relative to 1997/98)

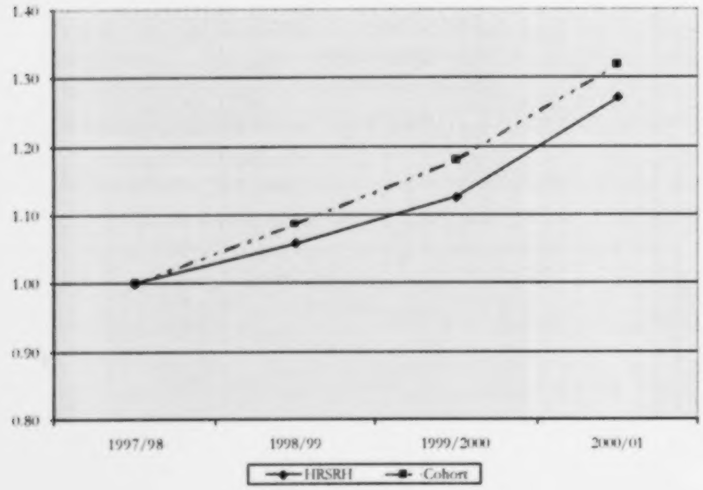


Exhibit 2: Expenses by Functional Group at HRSRH (1997/98 to 2000/01) - Excludes Other Votes

Functional Group	1997/98	1998/99	1999/2000	2000/01
Nursing Inpatient	61,516,117	63,451,009	69,312,451	70,432,453
Ambulatory Care and Community	17,505,370	17,181,415	21,140,816	23,007,306
Diagnostic Services	30,380,370	31,270,191	35,101,715	37,345,283
Therapeutic Services	9,203,425	11,170,031	8,089,999	16,125,399
Education and Research	838,204	801,026	689,480	682,928
Administration and Support	40,671,528	40,964,808	40,906,361	53,104,055
Undistributed Expenses	5,869,224	10,794,059	11,611,458	10,183,772
Total	165,984,238	175,632,539	186,852,280	210,881,196

Appendix XI: Detailed Financial Benchmarking Results

Exhibit 3: Trends in Expenses by Functional Group- Nursing Inpatient Services (1997/98 to 2000/01 relative to 1997/98)

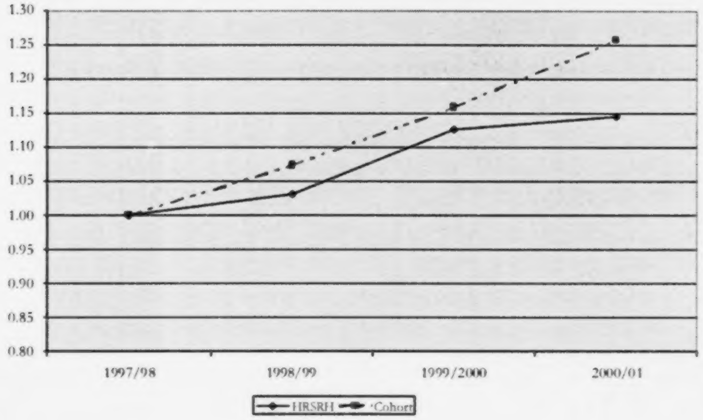


Exhibit 4: Trends in Expenses by Functional Group - Ambulatory Care Services (ER, Clinics, and Day/Night Care) (1997/98 to 2000/01 relative to 1997/98)

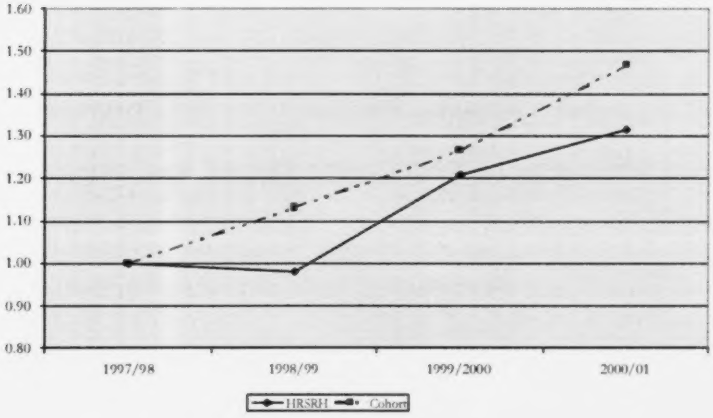


Exhibit 5: Trends in Expenses by Functional Group - Diagnostic Services (Lab, DI, Electrodiag, Non Invasive Cardiology) (1997/98 to 2000/01 relative to 1997/98)

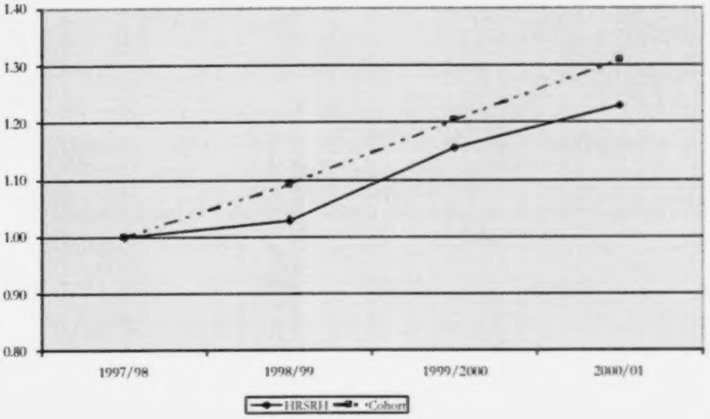


Exhibit 6: Trends in Expenses by Functional Group - Therapeutic Services (Pharmacy, RT, PT, OT, SLP, Social Work, Psychology, etc.) (1997/98 to 2000/01 relative to 1997/98)

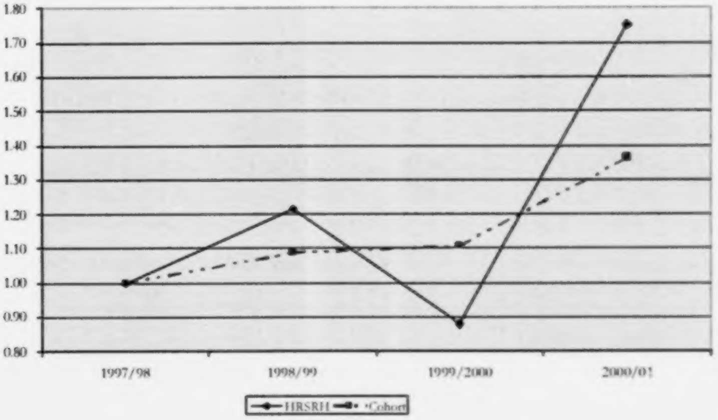


Exhibit 7: Trends in Expenses by Functional Group - Research and Education (1997/98 to 2000/01 relative to 1997/98)

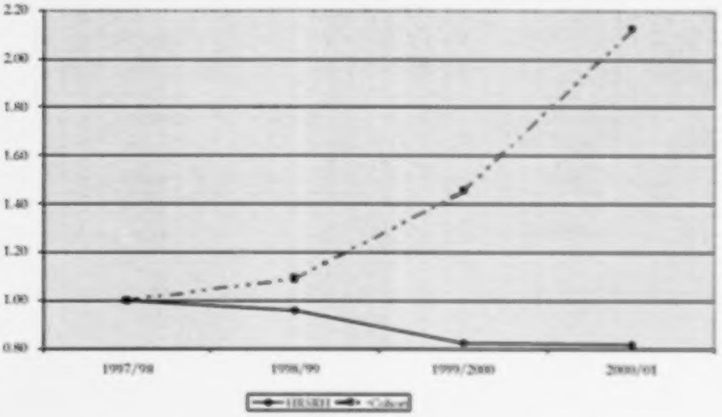


Exhibit 8: Trends in Expenses by Functional Group - Administration and Support (1997/98 to 2000/01 relative to 1997/98)

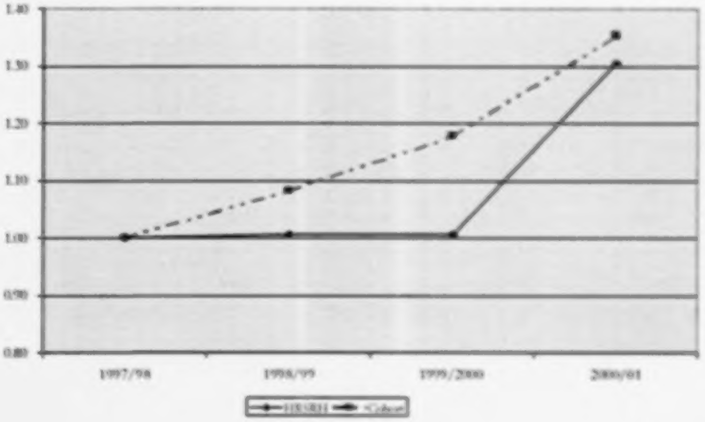
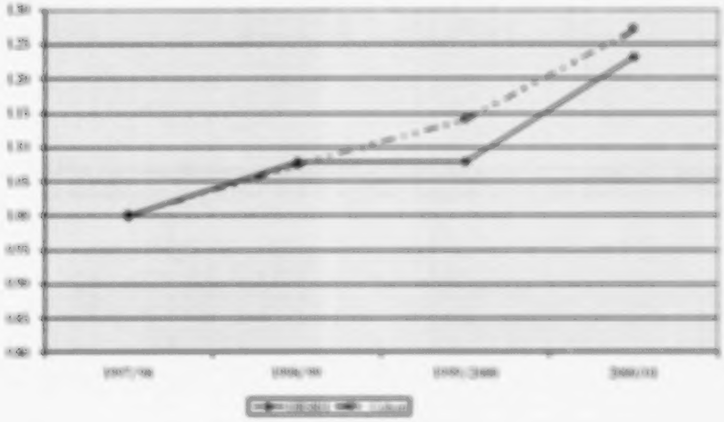


Exhibit 9: Expenses by Type at HRSRH (1997/98 to 2000/01) – (Excludes Other Votes)

Expense Type	1997/98	1998/99	1999/2000	2000/01
Compensation	119,903,149	129,267,998	129,277,841	147,645,533
Med/Surg Supplies	12,707,909	13,120,654	14,386,131	15,707,549
Drugs	5,986,111	6,742,750	7,267,011	9,678,543
Other Supplies	14,966,229	14,225,009	18,708,794	16,814,208
Sundry	4,464,628	2,895,233	5,597,258	4,881,630
Equipment	6,908,478	6,933,385	10,553,518	11,197,141
Referred Out	408,614	891,483	2,128	2,604,571
Buildings and Grounds	635,120	1,556,024	1,059,599	2,350,563
Total	165,984,238	175,632,539	186,852,280	210,881,196

Exhibit 10: Trends in Expenses by Type - Compensation (1997/98 to 2000/01 relative to 1997/98)



Appendix XI: Detailed Financial Benchmarking Results

Exhibit 11: Trends in Expenses by Type – Medical & Surgical Supplies (1997/98 to 2000/01 relative to 1997/98)

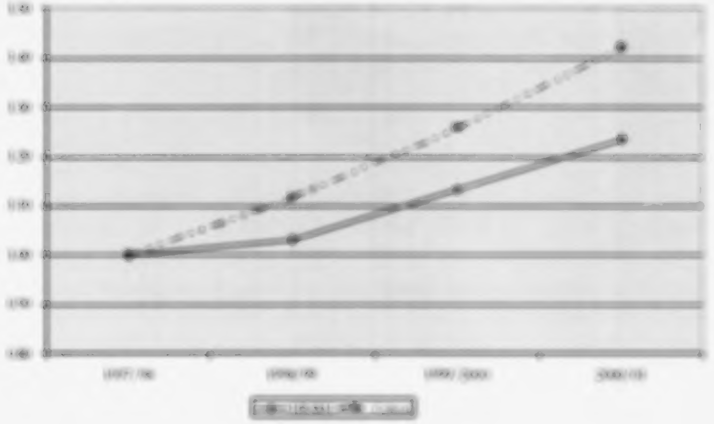


Exhibit 12: Trends in Expenses by Type - Drugs and Medical Gases (1997/98 to 2000/01 relative to 1997/98)

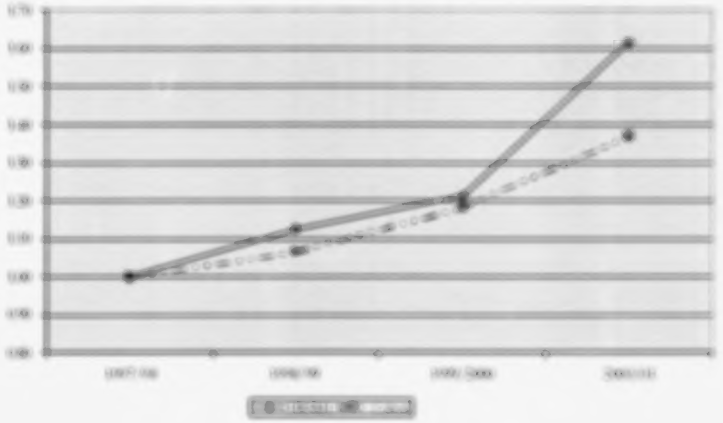


Exhibit 15: Trends in Expenses by Type - Other Supplies (includes non-Med/Surg clinical supplies) (1997/98 to 2000/01 relative to 1997/98)

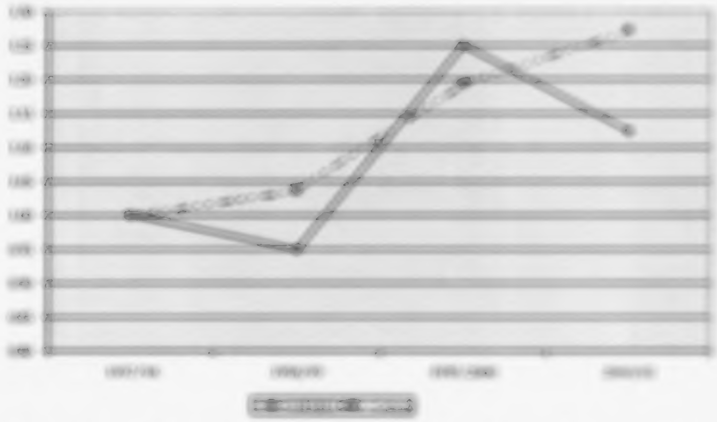
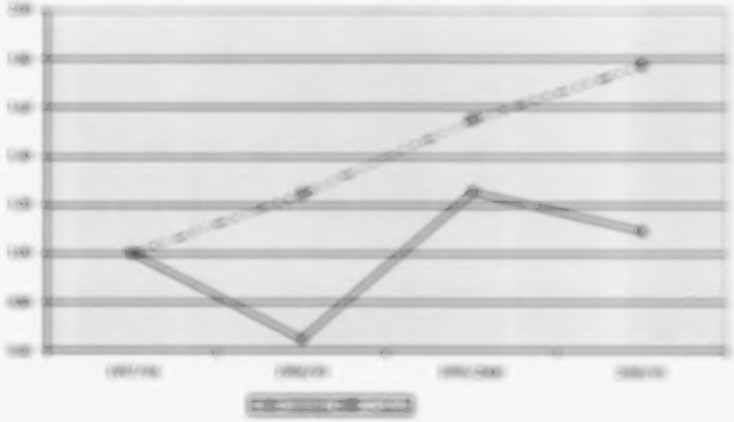


Exhibit 16: Trends in Expenses by Type - Sundry (Stat Supplies, Professional Fees, Bank Charges, Travel Expenses, etc.) (1997/98 to 2000/01 relative to 1997/98)



Appendix VI: Detailed Financial Benchmarking Results

Exhibit [illegible]: Trends in Expenses by Type – Equipment (Maintenance, Leasing, Amortization, Minor Equip. Purchases, etc.) (1997/98 to 2000/01 relative to 1997/98)

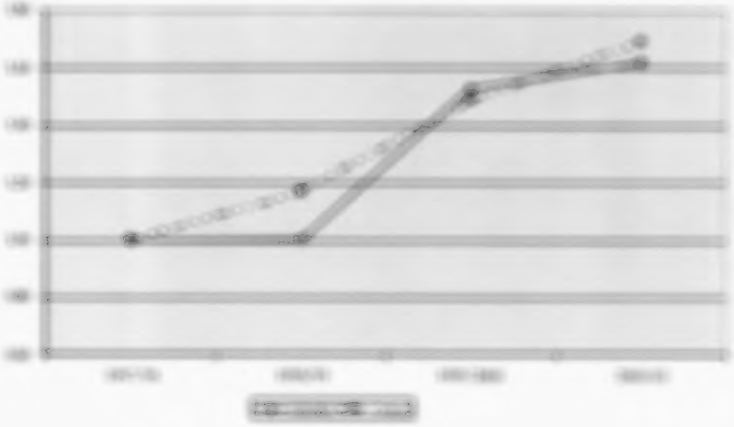
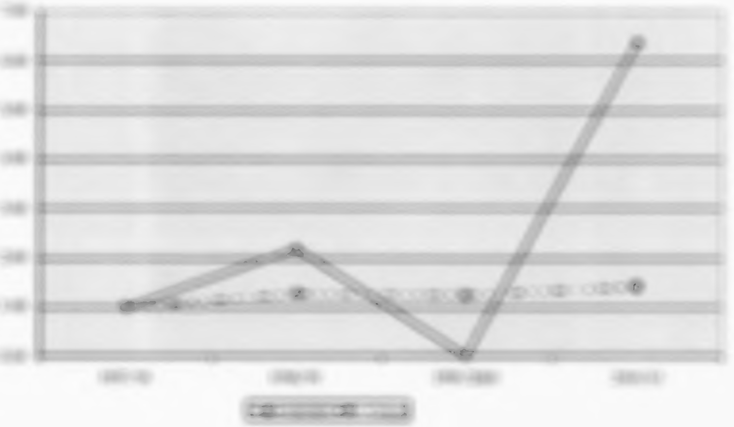


Exhibit [illegible]: Trends in Expenses by Type – Referred-Out Expenses (1997/98 to 2000/01 relative to 1997/98)



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Trends in Total Revenue and Expenses

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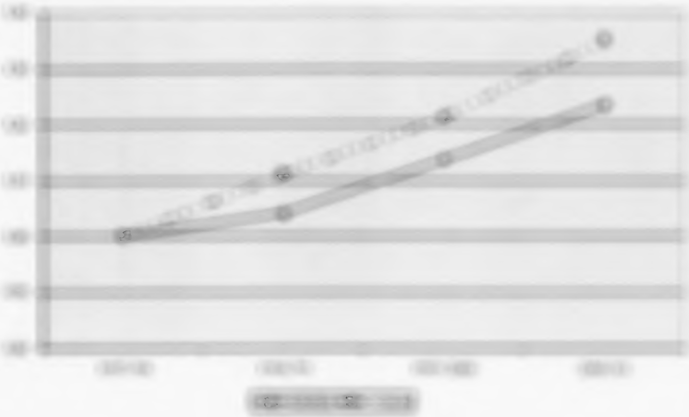

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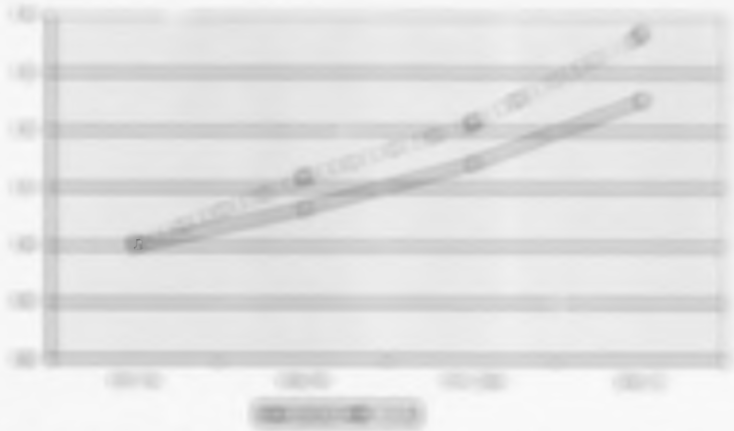

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Appendix XI: Detailed Financial Benchmarking Results

Exhibit 21: Trends in Revenues by Source - External Recoveries (1997/98 to 2000/01 relative to 1997/98)

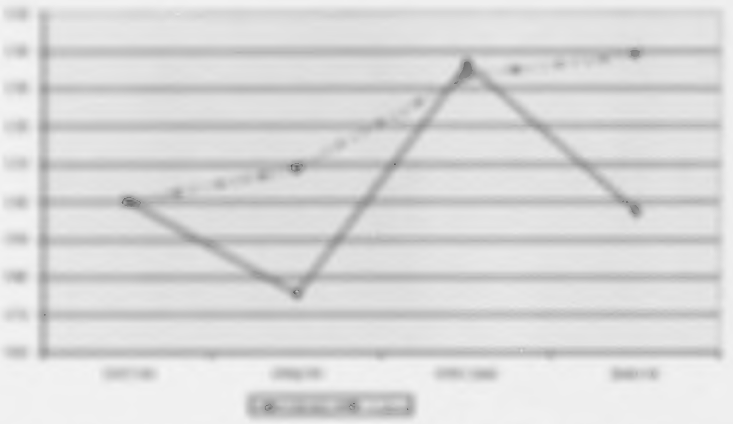


Exhibit 22: Trends in Revenues by Source - Donations and Grants (1997/98 to 2000/01 relative to 1997/98)

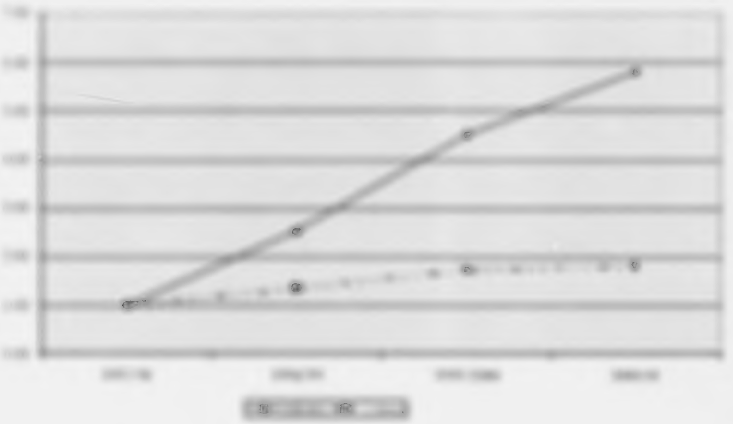
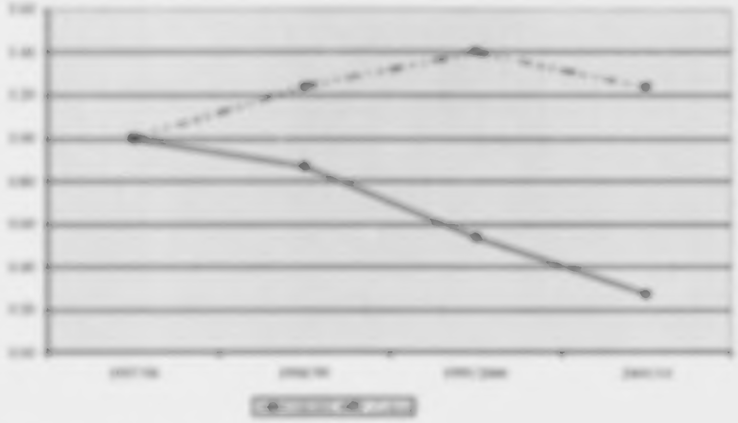


Exhibit 23: Trends in Revenues by Source - Revenues Not Elsewhere Classified (1997/98 to 2000/01 relative to 97/98)



Trends in Activity

Exhibit 24: Trends in Key Patient Activity Statistics for HRSRH (1997/98 to 2000/01)

Revenue Source	1997/98	1998/99	1999/2000	2000/01
Acute Weighted Cases	38,742	39,230	37,730	37,496
Chronic Care Days	18,078	18,601	18,479	18,152
Rehabilitation Days	6,308	6,722	6,424	6,337
Clinic & Day/Night Visits	126,756	238,524	143,230	149,368
ER Visits	80,520	75,196	63,571	61,426

Exhibit 25: Trends in Activity - Acute Inpatient and Day Surgery Weighted Cases (PIs 2000) (1997/98 to 2000/01 relative to 1997/98)

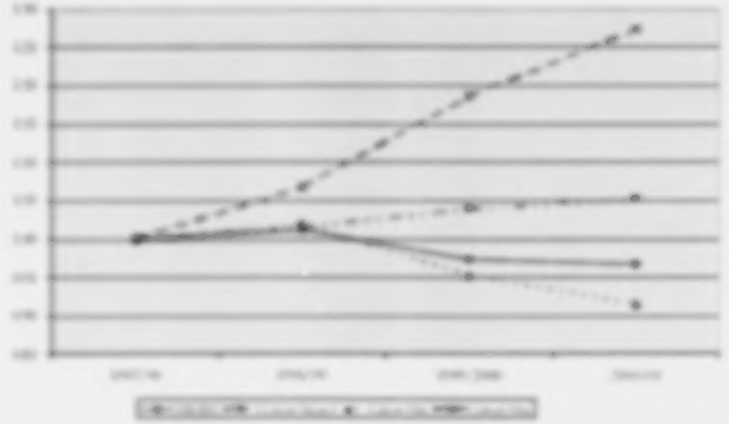


Exhibit 26: Trends in Activity – Chronic Care Days (1997/98 to 2000/01 relative to 1997/98)

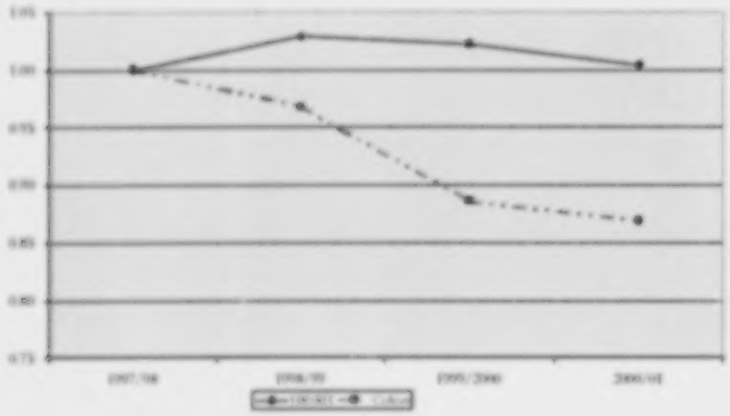
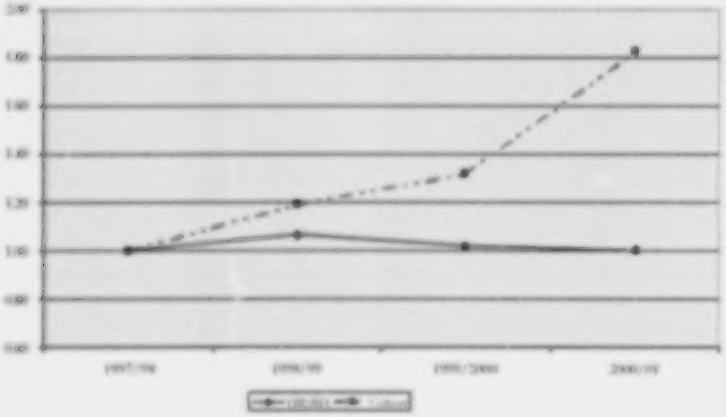


Exhibit 27: Trends in Activity - Inpatient Rehabilitation Days (1997/98 to 2000/01 relative to 1997/98)



Appendix XI: Detailed Financial Benchmarking Results

Exhibit 28: Trends in Activity - Clinic and Day/Night Care Visits (1997/98 to 2000/01 relative to 1997/98)

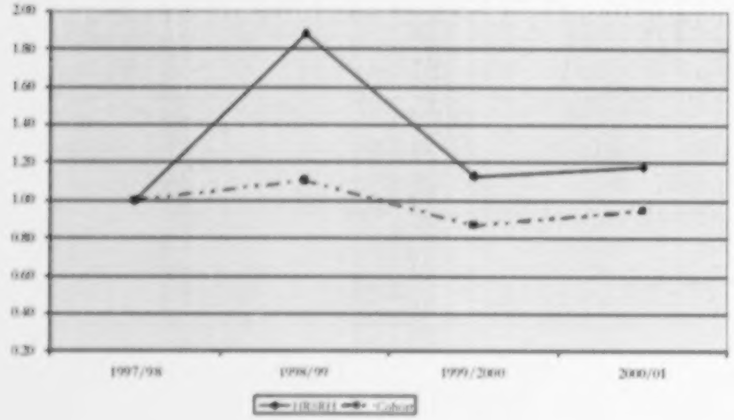
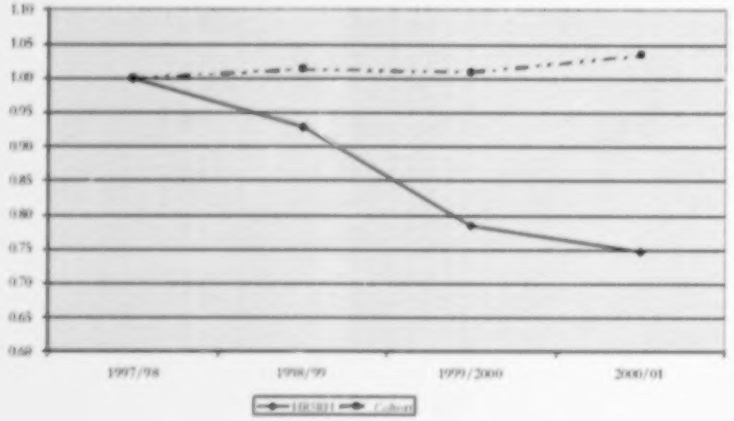
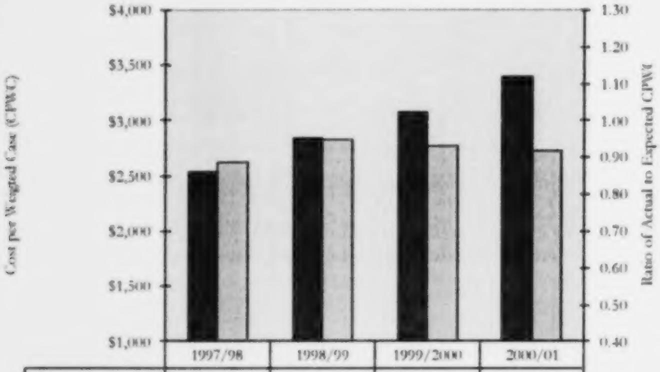


Exhibit 29: Trends in Activity - Emergency Room Visits (1997/98 to 2000/01 relative to 1997/98)



Trends in Cost per Weighted Case

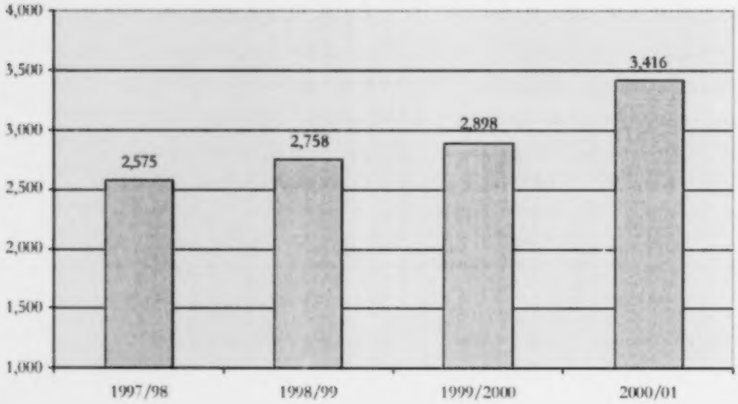
Exhibit 30: HRSRH Actual and Expected Cost per Weighted Case (1997/98 to 2000/01) (Cost per Equivalent WeightedCase in 1999/00 and 2000/01)



	1997/98	1998/99	1999/2000	2000/01
■ Actual CPWC	$2,544	$2,842	$3,085	$3,394
▭ Expected CPWC	$2,620	$2,835	$2,775	$2,731
Ratio	0.97	1.00	1.11	1.24

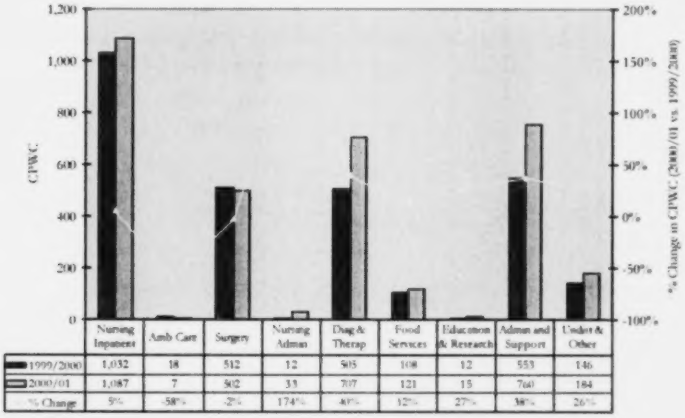
Exhibit 31: HRSRH Cost per Standardized Weighted Case (1997/98 to 2000/01)

(Grouped by PIx 2000 for All Years)



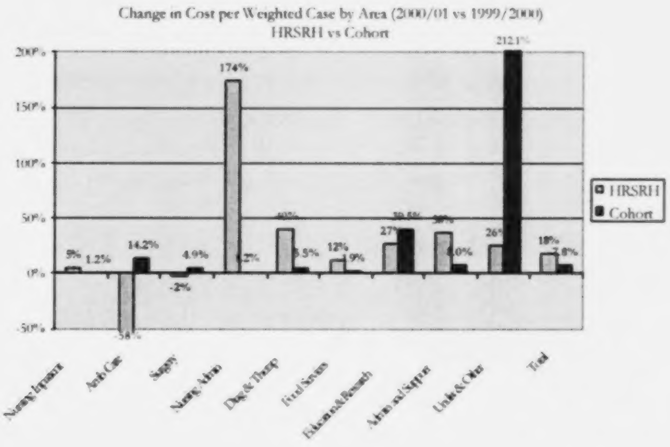
Appendix XI: Detailed Financial Benchmarking Results

Exhibit 32: HRSRH Cost per Weighted Case by Functional Area (1999/00 and 2000/01)



	Nursing Inpatient	Amb Care	Surgery	Nursing Admin	Diag & Therap	Food Services	Education & Research	Admin and Support	Under & Other
1999/2000	1,032	18	512	12	505	108	12	553	146
2000/01	1,087	7	502	33	707	121	15	760	184
% Change	5%	-58%	-2%	174%	40%	12%	27%	38%	26%

Exhibit 33: Change in Cost per Weighted Case by Area - HRSRH vs Cohort (2000/01 vs 1999/00)



Appendix XI: Detailed Financial Benchmarking Results

Exhibit 34: Cost per Weighted Case by Area – HRSRH vs Cohort ((1999/00 and 2000/01)

	HRSRH		Cohort	
Area	**1999/2000**	**2000/01**	**1999/2000**	**2000/01**
Nursing Inpatient	1,032	1,087	1,076	1,089
Amb Care	18	7	20	23
Surgery	512	502	400	419
Nursing Admin	12	33	31	31
Diag & Therap	505	707	402	423
Food Services	108	121	91	93
Education & Research	12	15	18	25
Admin and Support	553	760	549	593
Undist & Other	146	184	44	138
Total	2,898	3,416	2,631	2,835

M121

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Functional Centre Level Trend and Benchmarking Analysis

Administrative and Support Functional Centres

General Administration

Exhibit 35: General Administration Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Total Other Net Expenses	Net Functional Centre Expenses / Total Other Expenses	2000/2001 Functional Centre Stats Net Expenses	2000/2001 Weighted Cases	Expenses/ Weighted Cases
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
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	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Mid Size 25th Percentile		[illegible]			[illegible]
	Mid Size 50th Percentile		[illegible]			[illegible]
	Northern Ont. 25th Percentile		[illegible]			[illegible]
	Northern Ont. 50th Percentile		[illegible]			[illegible]

Functional Centre Level Trend and Benchmarking Analysis

Administrative and Support Functional Centres

General Administration

Exhibit [illegible]: General Administration Functional Centre Benchmarking – Expenses [illegible] Hospital Direct Expenses and Expenses per Weighted Case ([illegible])

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Finance

Exhibit [illegible]: Finance Functional Costs Benchmarking – [illegible]

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Finance

Exhibit 36: Finance Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

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Personnel Services

Exhibit 37: Personnel Services Functional Centre Benchmarking - Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

[illegible]	2000/2001 Functional Centre Net Expenses	2000/2001 Total Direct Net Expenses	Net Functional Centre Expenses / Total Direct Expenses	2000/2001 Functional Centre Adj. Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Windsor Reg.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Scarborough Gr.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
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	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
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	[illegible] 50th Percentile		[illegible]			[illegible]

Systems Support

Exhibit 38: Systems Support Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Humber River	$1,555,846	$120,408,154	1.49%	$1,214,015	45,482	$26.25
Thunder Bay Reg	$1,525,861	$88,154,859	1.56%	$815,517	27,935	$30.10
Trillium	$2,491,964	$148,863,597	1.67%	$1,312,508	41,133	$31.89
William Osler	$3,163,030	$165,794,775	1.86%	$1,771,646	52,782	$33.55
Windsor Reg	$2,670,165	$173,625,472	1.52%	$1,714,275	50,945	$33.65
Peterborough Cc	$1,480,089	$81,390,389	1.82%	$821,118	24,089	$34.10
Rouge Valley	$2,555,581	$119,174,089	2.14%	$1,459,522	36,696	$39.72
Royal Victoria	$1,591,677	$68,572,414	2.31%	$864,577	21,326	$40.64
Grand River	$2,284,526	$92,253,097	2.48%	$1,107,829	24,324	$45.54
Lakeridge	$3,344,805	$146,362,250	2.29%	$1,700,744	38,215	$44.52
Credit Valley	$2,774,515	$104,597,499	2.65%	$1,245,491	25,163	$49.63
[illegible]	$3,066,200	$152,284,909	0.98%	$1,898,920	37,498	$50.69
North Bay Gen	$1,160,190	$46,256,811	2.51%	$759,452	14,535	$52.25
Sault Area Hosps	$2,064,351	$65,124,559	3.17%	$1,116,569	17,852	$62.55
St. Joseph's - Ham	$3,976,086	$127,849,611	3.11%	$2,311,910	36,465	$63.40
Kingston Gen	$3,658,863	$129,668,616	2.82%	$2,695,529	37,366	$72.14
North York Gen	$4,855,778	$126,465,751	3.84%	$2,794,458	37,434	$74.62
	Mean		2.51%			$46.15
	25th Percentile		1.86%			$33.65
	50th Percentile		2.29%			$45.54
	75th Percentile		2.65%			$52.25
	Multi Site 25th Percentile		1.75%			$33.57
	Multi Site 50th Percentile		2.03%			$41.61
	Northern/Sole 25th Percentile		1.82%			$34.10
	Northern/Sole 50th Percentile		2.51%			$45.54

Appendix XI: Detailed Financial Benchmarking Results

Material Management

Exhibit 39: Material Management Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Credit Valley	$1,587,634	$104,597,499	1.52%	$714,881	25,165	$28.41
North York Gen	$2,519,284	$126,463,731	1.99%	$1,451,202	37,414	$38.79
Royal Victoria	$1,636,257	$68,972,414	2.37%	$890,643	21,320	$41.77
Sault Area Hosps	$1,461,102	$65,124,559	2.24%	$753,601	17,832	$42.26
Humber River	$3,176,126	$129,418,034	2.45%	$1,961,033	45,482	$43.12
Trillium	$3,458,548	$148,861,997	2.32%	$1,822,058	41,155	$44.27
Grand River	$2,441,809	$92,255,697	2.65%	$1,130,756	24,320	$46.49
William Osler	$4,290,748	$169,794,773	2.53%	$2,488,398	52,782	$47.14
Rouge Valley	$3,131,565	$119,174,989	2.63%	$1,752,829	36,006	$48.68
St. Joseph's - Ham	$3,253,695	$127,849,611	2.54%	$1,890,683	36,463	$51.85
Peterborough Civ	$2,267,653	$81,390,589	2.79%	$1,258,652	24,089	$52.25
Thunder Bay Reg	$2,307,852	$88,134,859	2.62%	$1,487,565	27,895	$53.33
Windsor Reg	$4,347,515	$175,625,472	2.48%	$2,814,853	50,943	$55.25
Lakeridge	$4,414,191	$146,962,230	3.00%	$2,244,498	38,203	$58.75
HRSRH	**$4,783,569**	**$153,284,309**	**3.12%**	**$3,043,164**	**37,458**	**$81.24**
Kingston Gen	$4,872,980	$129,668,606	3.76%	$3,595,030	37,416	$96.08
North Bay Gen	$2,169,644	$46,256,811	4.69%	$1,420,306	14,353	$98.96
	Mean		2.69%			$54.63
	25th Percentile		2.37%			$43.12
	50th Percentile		2.54%			$48.68
	75th Percentile		2.79%			$55.25
	Multi Site 25th Percentile		2.46%			$44.83
	Multi Site 50th Percentile		2.62%			$50.47
	Northern/Sole 25th Percentile		2.48%			$46.49
	Northern/Sole 50th Percentile		2.65%			$53.33

Systems Support

Exhibit 38: Systems Support Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Humber River	$1,933,846	$129,418,034	1.49%	$1,194,013	45,482	$26.25
Thunder Bay Reg	$1,323,861	$88,134,859	1.50%	$853,317	27,895	$30.59
Trillium	$2,490,964	$148,861,997	1.67%	$1,312,308	41,155	$31.89
William Osler	$3,053,059	$169,794,773	1.80%	$1,770,606	52,782	$33.55
Windsor Reg	$2,670,163	$175,625,472	1.52%	$1,714,279	50,943	$33.65
Peterborough Civ	$1,480,089	$81,390,589	1.82%	$821,518	24,089	$34.10
Rouge Valley	$2,555,381	$119,174,989	2.14%	$1,430,322	36,006	$39.72
Royal Victoria	$1,591,677	$68,972,414	2.31%	$866,377	21,320	$40.64
Grand River	$2,284,326	$92,255,697	2.48%	$1,057,829	24,320	$43.50
Lakeridge	$3,344,805	$146,962,230	2.28%	$1,700,744	38,203	$44.52
Credit Valley	$2,774,915	$104,597,499	2.65%	$1,249,490	25,165	$49.65
HRSRH	**$2,966,205**	**$152,284,309**	**1.95%**	**$1,898,920**	**37,458**	**$50.69**
North Bay Gen	$1,160,100	$46,256,811	2.51%	$759,432	14,353	$52.91
Sault Area Hosps	$2,164,331	$65,124,559	3.32%	$1,116,309	17,832	$62.60
St. Joseph - Ham	$3,978,586	$127,849,611	3.11%	$2,311,910	36,463	$63.40
Kingston Gen	$3,658,863	$129,668,606	2.82%	$2,699,329	37,416	$72.14
North York Gen	$4,833,778	$126,463,731	3.82%	$2,784,438	37,414	$74.42
	Mean		2.31%			$46.13
	25th Percentile		1.80%			$33.65
	50th Percentile		2.28%			$43.50
	75th Percentile		2.65%			$52.91
	Multi Site 25th Percentile		1.70%			$33.57
	Multi Site 50th Percentile		2.05%			$41.61
	Northern/Sole 25th Percentile		1.82%			$34.10
	Northern/Sole 50th Percentile		2.31%			$43.50

Appendix XI: Detailed Financial Benchmarking Results

Material Management

Exhibit 39: Material Management Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Credit Valley	$1,587,634	$104,597,499	1.52%	$714,881	25,165	$28.41
North York Gen	$2,519,284	$126,463,731	1.99%	$1,451,202	37,414	$38.79
Royal Victoria	$1,636,257	$68,972,414	2.37%	$890,643	21,320	$41.77
Sault Area Hosps	$1,461,102	$65,124,559	2.24%	$753,601	17,832	$42.26
Humber River	$3,176,126	$129,418,034	2.45%	$1,961,033	45,482	$43.12
Trillium	$3,458,548	$148,861,997	2.32%	$1,822,058	41,155	$44.27
Grand River	$2,441,809	$92,255,697	2.65%	$1,130,756	24,320	$46.49
William Osler	$4,290,748	$169,794,773	2.53%	$2,488,398	52,782	$47.14
Rouge Valley	$3,131,565	$119,174,989	2.63%	$1,752,829	36,006	$48.68
St. Joseph - Ham	$3,253,693	$127,849,611	2.54%	$1,890,683	36,463	$51.85
Peterborough Civ	$2,267,653	$81,390,589	2.79%	$1,258,652	24,089	$52.25
Thunder Bay Reg	$2,307,852	$88,134,859	2.62%	$1,487,565	27,895	$53.33
Windsor Reg	$4,347,515	$175,625,472	2.48%	$2,814,853	50,943	$55.25
Lakeridge	$4,414,191	$146,962,230	3.00%	$2,244,498	38,203	$58.75
HRSRH	**$4,753,569**	**$152,284,309**	**3.12%**	**$3,043,164**	**37,458**	**$81.24**
Kingston Gen	$4,872,960	$129,668,606	3.76%	$3,595,030	37,416	$96.08
North Bay Gen	$2,169,644	$46,256,811	4.69%	$1,420,306	14,353	$98.96
	Mean		2.69%			$54.63
	25th Percentile		2.37%			$43.12
	50th Percentile		2.54%			$48.68
	75th Percentile		2.79%			$55.25
	Multi Site 25th Percentile		2.46%			$44.83
	Multi Site 50th Percentile		2.62%			$50.47
	Northern/Sole 25th Percentile		2.48%			$46.49
	Northern/Sole 50th Percentile		2.65%			$53.33

Volunteer Services

Exhibit 40: Volunteer Services Functional Centre Benchmarking– Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
St. Joseph - Ham	$66,048	$127,849,611	0.05%	$38,380	36,463	$1.05
Thunder Bay Reg	$69,976	$88,134,859	0.08%	$45,104	27,895	$1.62
Sault Area Hosps	$61,857	$65,124,559	0.09%	$31,904	17,832	$1.79
Humber River	$139,527	$129,418,034	0.11%	$86,148	45,482	$1.89
Credit Valley	$136,384	$104,597,499	0.13%	$61,411	25,165	$2.44
Lakeridge	$185,986	$146,962,230	0.13%	$94,569	38,203	$2.48
Rouge Valley	$182,990	$119,174,989	0.15%	$102,425	36,006	$2.84
Kingston Gen	$162,183	$129,668,606	0.13%	$119,651	37,416	$3.20
William Osler	$294,428	$169,794,773	0.17%	$170,752	52,782	$3.24
Grand River	$173,850	$92,255,697	0.19%	$80,507	24,320	$3.31
Peterborough Civ	$151,710	$81,390,589	0.19%	$84,206	24,089	$3.50
Windsor Reg	$288,719	$175,625,472	0.16%	$182,871	50,943	$3.59
North York Gen	$242,357	$126,463,731	0.19%	$139,607	37,414	$3.73
Royal Victoria	$149,867	$68,972,414	0.22%	$81,575	21,320	$3.83
HRSRH	**$230,505**	**$152,284,309**	**0.15%**	**$147,566**	**37,458**	**$3.94**
Trillium	$369,426	$148,861,997	0.25%	$194,624	41,155	$4.73
North Bay Gen	$114,239	$46,256,811	0.25%	$74,784	14,353	$5.21
	Mean		0.16%			$3.08
	25th Percentile		0.13%			$2.44
	50th Percentile		0.15%			$3.24
	75th Percentile		0.19%			$3.73
	Multi Site 25th Percentile		0.13%			$2.57
	Multi Site 50th Percentile		0.16%			$3.27
	Northern/Sole 25th Percentile		0.13%			$3.20
	Northern/Sole 50th Percentile		0.16%			$3.50

Housekeeping

Exhibit 41: Housekeeping Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Humber River	$4,646,395	$129,418,034	3.59%	$2,868,820	45,482	$63.08
North York Gen	$4,436,412	$126,463,731	3.51%	$2,555,540	37,414	$68.30
Credit Valley	$3,944,470	$104,597,499	3.77%	$1,776,118	25,165	$70.58
Royal Victoria	$2,828,014	$68,972,414	4.10%	$1,539,336	21,320	$72.20
Peterborough Cr	$3,348,358	$81,390,589	4.11%	$1,858,494	24,089	$77.15
Thunder Bay Reg	$3,550,364	$88,134,859	4.03%	$2,288,448	27,895	$82.04
Sault Area Hosps	$2,871,537	$65,124,559	4.41%	$1,481,069	17,832	$83.05
William Osler	$7,888,912	$169,794,773	4.65%	$4,575,135	52,782	$86.68
Lakeridge	$6,892,852	$146,962,230	4.69%	$3,504,831	38,203	$91.74
Grand River	$4,821,046	$92,253,697	5.23%	$2,232,556	24,320	$91.80
North Bay Gen	$2,019,380	$46,256,811	4.37%	$1,321,959	14,353	$92.10
HRSRH	**$5,468,602**	**$152,294,309**	**3.59%**	**$3,500,918**	**37,458**	**$93.46**
Kingston Gen	$4,855,852	$129,668,606	3.74%	$3,582,409	37,416	$95.75
St. Joseph - Ham	$6,097,265	$127,849,611	4.77%	$3,543,050	36,463	$97.17
Windsor Reg	$8,869,631	$175,625,472	5.05%	$5,622,309	50,943	$110.36
Trillium	$8,876,616	$148,861,997	5.96%	$4,676,445	41,155	$113.63
Rouge Valley	$7,975,907	$119,174,989	6.69%	$4,464,349	36,006	$123.99
	Mean		4.49%			$89.01
	25th Percentile		3.77%			$77.15
	50th Percentile		4.37%			$91.74
	75th Percentile		4.77%			$95.75
	Multi Site 25th Percentile		3.82%			$82.29
	Multi Site 50th Percentile		4.39%			$91.77
	Northern/Sole 25th Percentile		4.03%			$82.04
	Northern/Sole 50th Percentile		4.11%			$91.80

Volunteer Services

Exhibit 40: Volunteer Services Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Total Direct Net Expenses	Net Functional Centre Expenses / Total Direct Expenses	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Cases
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HRSRH	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	Northern Sole 25th Percentile		[illegible]			[illegible]
	Northern Sole 50th Percentile		[illegible]			[illegible]

Housekeeping

Exhibit 41: Housekeeping Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Total Direct Net Expenses	Net Functional Centre Expenses / Total Direct Expenses	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Cases
Hamilton Heal	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Co	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hospi	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oshawa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	Northern Sole 25th Percentile		[illegible]			[illegible]
	Northern Sole 50th Percentile		[illegible]			[illegible]

Laundry and Linen

Exhibit [illegible]: Laundry and Linen Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case ([illegible])

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Plant

Exhibit [illegible]: Plant Functional Centre Benchmarking – Expense Over Hospital Direct Expense and Expense per Weighted Case ([illegible])

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Plant Administration

Exhibit [illegible]: Plant Administration Functional Centre Benchmarking – Expense Over Hospital Direct Expense and Expense per Weighted Case ([illegible])

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

[illegible]

Laundry and Linen

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Plant Operation

Exhibit 49: Plant Operation Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Total Direct Net Expenses	Net Functional Centre Expenses / Total Direct Expenses	2000/2001 Functional Centre Area Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Cases
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]

Plant Security

Exhibit 46: Plant Security Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Total Direct Net Expenses	Net Functional Centre Expenses / Total Direct Expenses	2000/2001 Functional Centre [illegible] Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hospit	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]

Plant Operation

Exhibit 45: Plant Operation Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Total Direct Net Expenses	Net Functional Centre Expenses / Total Direct Expenses	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses/ Weighted Cases
St. Joseph - Ham	$2,490,144	$127,849,133	1.94%	$1,444,033	36,463	$39.62
Royal Victoria	$1,385,082	$68,372,414	2.54%	$863,038	21,324	$40.42
North Bay Gen	$931,497	$46,236,813	1.97%	$594,193	14,535	$41.35
Sault Area Hosp	$1,324,874	$63,126,555	2.34%	$786,305	17,852	$44.11
Thunder Bay Reg	$1,358,345	$88,134,835	2.26%	$1,249,777	27,893	$44.80
Peterborough Cir	$1,346,444	$81,591,089	2.39%	$1,090,366	24,095	$44.85
Humber River	$3,593,958	$121,458,154	2.63%	$2,098,715	45,482	$46.14
Credit Valley	$2,615,495	$104,107,499	2.59%	$1,175,803	25,163	$46.73
Rouge Valley	$3,366,028	$133,174,089	2.82%	$1,884,413	36,446	$52.35
Lakeridge	$4,313,374	$146,102,250	2.75%	$2,087,479	38,215	$54.64
William Osler	$3,384,308	$101,794,775	3.09%	$3,496,332	52,782	$56.56
Windsor Reg	$4,898,267	$173,425,472	2.74%	$3,408,034	56,545	$60.24
HRRH	**$3,686,760**	**$132,284,500**	**2.49%**	**$2,345,864**	**37,456**	**$62.36**
North York Gen	$4,355,112	$126,465,731	3.44%	$2,367,396	37,414	$63.12
Trillium	$5,715,151	$143,061,597	3.83%	$3,093,850	41,133	$75.04
Kingston Gen	$5,088,049	$125,038,066	3.07%	$2,868,854	37,416	$76.47
Grand River	$3,225,395	$92,233,037	3.67%	$2,421,727	24,535	$99.58
	Mean		2.82%			$53.58
	25th Percentile		2.54%			$44.80
	50th Percentile		2.63%			$52.35
	75th Percentile		3.09%			$62.36
	Multi Site 25th Percentile		2.59%			$45.17
	Multi Site 50th Percentile		2.77%			$53.40
	Northern Style 25th Percentile		2.36%			$44.11
	Northern Style 50th Percentile		2.34%			$44.85

Plant Security

Exhibit 46: Plant Security Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Peterborough Cc	$676	$81,390,580	0.00%	$575	24,089	$0.02
Credit Valley	$9,373	$104,397,400	0.01%	$4,220	25,165	$0.17
Sault Area Hosps	$94,729	$65,124,590	0.15%	$48,850	17,832	$2.74
Thunder Bay Reg	$174,864	$88,134,850	0.20%	$112,712	27,895	$4.04
HRSRH	**$327,570**	**$152,284,309**	**0.22%**	**$209,705**	**37,450**	**$5.60**
Lakeridge	$544,702	$146,962,230	0.37%	$276,966	38,203	$7.25
Windsor Reg	$640,159	$175,625,472	0.36%	$411,414	50,945	$8.08
William Osler	$767,510	$169,794,775	0.45%	$445,114	52,782	$8.43
St. Joseph - Ham	$584,211	$127,849,611	0.46%	$339,478	36,463	$9.31
Trillium	$778,874	$148,861,597	0.52%	$410,332	41,155	$9.97
Royal Victoria	$400,626	$68,972,414	0.58%	$218,068	21,320	$10.23
Humber River	$806,677	$129,418,054	0.62%	$498,066	45,482	$10.95
Rouge Valley	$725,048	$119,174,989	0.61%	$405,831	36,006	$11.27
North York Gen	$776,380	$126,463,731	0.61%	$447,339	37,414	$11.96
Grand River	$673,062	$92,255,697	0.73%	$311,682	24,320	$12.82
Kingston Gen	$656,090	$129,668,046	0.51%	$484,474	37,416	$12.95
North Bay Gen	$520,987	$46,256,811	1.13%	$340,999	14,353	$23.76
	Mean		0.44%			$8.80
	25th Percentile		0.22%			$5.60
	50th Percentile		0.46%			$9.31
	75th Percentile		0.61%			$11.27
	Multi-Site 25th Percentile		0.25%			$6.01
	Multi-Site 50th Percentile		0.48%			$9.20
	Northern/Sole 25th Percentile		0.20%			$4.04
	Northern/Sole 50th Percentile		0.36%			$8.08

Plant Maintenance

Exhibit 47: Plant Maintenance Functional Centre Benchmarking– Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
William Osler	$2,230,531	$169,794,773	1.31%	$1,293,585	52,782	$24.51
North York Gen	$1,739,915	$126,463,731	1.38%	$1,002,256	37,414	$26.79
Humber River	$2,009,679	$129,418,034	1.55%	$1,240,835	45,482	$27.28
Sault Area Hosps	$1,083,518	$65,124,539	1.66%	$558,852	17,832	$31.34
Peterborough Civ	$1,563,547	$81,390,589	1.92%	$867,841	24,089	$36.03
Credit Valley	$2,054,296	$104,597,499	1.96%	$925,009	25,165	$36.76
Rouge Valley	$2,435,408	$119,174,989	2.04%	$1,363,169	36,006	$37.86
HRSRH	**$2,314,631**	**$152,284,309**	**1.52%**	**$1,481,792**	**37,458**	**$39.56**
Thunder Bay Reg	$1,809,855	$88,134,859	2.05%	$1,166,573	27,895	$41.82
Windsor Reg	$3,317,634	$175,625,472	1.89%	$2,135,249	50,943	$41.91
Royal Victoria	$1,673,491	$68,972,414	2.43%	$910,910	21,320	$42.73
Kingston Gen	$2,363,834	$129,668,606	1.82%	$1,743,921	37,416	$46.61
Trillium	$3,807,281	$148,861,997	2.56%	$2,005,780	41,155	$48.74
Lakeridge	$4,089,725	$146,962,230	2.78%	$2,079,516	38,203	$54.43
St. Joseph - Ham	$3,696,964	$127,849,611	2.89%	$2,148,263	36,463	$58.92
North Bay Gen	$2,818,644	$46,256,811	6.09%	$1,845,158	14,353	$128.56
	Mean		2.24%			$45.24
	25th Percentile		1.64%			$34.85
	50th Percentile		1.94%			$40.69
	75th Percentile		2.46%			$47.14
	Multi Site 25th Percentile		1.55%			$31.34
	Multi Site 50th Percentile		1.89%			$39.56
	Northern/Sole 25th Percentile		1.78%			$38.68
	Northern/Sole 50th Percentile		1.91%			$41.87

Appendix XI: Detailed Financial Benchmarking Results

Bio-Medical Engineering

Exhibit 48: Bio-Medical Engineering Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Credit Valley	$261,428	$104,597,499	0.25%	$117,716	25,165	$4.68
Royal Victoria	$189,603	$68,972,414	0.27%	$103,204	21,320	$4.84
Rouge Valley	$314,299	$119,174,989	0.26%	$175,922	36,006	$4.89
Lakeridge	$394,683	$146,962,230	0.27%	$200,686	38,203	$5.25
Trillium	$469,296	$148,861,997	0.32%	$247,238	41,155	$6.01
Humber River	$445,709	$129,418,034	0.34%	$275,194	45,482	$6.05
William Osler	$578,465	$169,794,773	0.34%	$335,478	52,782	$6.36
Windsor Reg	$560,125	$175,625,472	0.32%	$364,655	50,943	$7.16
St. Joseph - Ham	$454,409	$127,849,611	0.36%	$264,052	36,463	$7.24
Thunder Bay Reg	$416,827	$88,134,859	0.47%	$268,673	27,895	$9.63
Grand River	$540,437	$92,255,697	0.59%	$250,266	24,320	$10.29
Sault Area Hosps	$394,524	$65,124,559	0.61%	$203,486	17,832	$11.41
Kingston Gen	$944,858	$129,668,606	0.73%	$697,070	37,416	$18.63
HRSRH	**$1,970,363**	**$152,284,309**	**1.29%**	**$1,261,397**	**37,458**	**$33.67**
	Mean		0.46%			$9.72
	25th Percentile		0.28%			$5.44
	50th Percentile		0.34%			$6.76
	75th Percentile		0.56%			$10.13
	Multi Site 25th Percentile		0.32%			$6.03
	Multi Site 50th Percentile		0.34%			$7.16
	Northern/Sole 25th Percentile		0.40%			$8.39
	Northern/Sole 50th Percentile		0.59%			$10.29

Check that numbers match with the table used in the departmental chapter, since had been modified several times

Exhibit 49: HRSRH Equipment Expense Trends (1997/98 to 2000/01)

Expenses Type	**1997/98**	**1998/99**	**1999/2000**	**2000/01**
Bio-Medical Engineering	1,536,728	1,379,212	1,601,912	1,418,290
External Maintenance	2,660,458	2,188,458	2,486,545	3,512,458
Parts Replacement	28,828	72,483	486	1,126
Amortization	3,112,399	4,067,492	6,228,879	6,457,470
Equipment Purchases	332,985	375,163	473,957	432,797
Rental/Lease/Loans	200,763	125,388	192,065	345,655
Total	7,872,161	8,208,196	10,983,844	12,167,796

Plant Maintenance

Exhibit 47: Plant Maintenance Functional Centre Benchmarking– Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
William Osler	$2,230,531	$169,794,773	1.31%	$1,293,585	52,782	$24.51
North York Gen	$1,739,915	$126,463,731	1.38%	$1,002,256	37,414	$26.79
Humber River	$2,009,679	$129,418,034	1.55%	$1,240,835	45,482	$27.28
Sault Area Hosps	$1,083,518	$65,124,559	1.66%	$558,852	17,832	$31.34
Peterborough Civ	$1,563,547	$81,390,589	1.92%	$867,841	24,089	$36.03
Credit Valley	$2,054,296	$104,597,499	1.96%	$925,009	25,165	$36.76
Rouge Valley	$2,435,408	$119,174,989	2.04%	$1,363,169	36,006	$37.86
HRSRH	**$2,314,631**	**$152,284,309**	**1.52%**	**$1,481,792**	**37,458**	**$39.56**
Thunder Bay Reg	$1,809,855	$88,134,859	2.05%	$1,166,573	27,895	$41.82
Windsor Reg	$3,317,634	$175,625,472	1.89%	$2,135,249	50,943	$41.91
Royal Victoria	$1,673,491	$68,972,414	2.43%	$910,910	21,320	$42.73
Kingston Gen	$2,363,834	$129,668,606	1.82%	$1,743,921	37,416	$46.61
Trillium	$3,807,281	$148,861,997	2.56%	$2,005,780	41,155	$48.74
Lakeridge	$4,089,725	$146,962,230	2.78%	$2,079,516	38,203	$54.43
St. Joseph - Ham	$3,696,964	$127,849,611	2.89%	$2,148,263	36,463	$58.92
North Bay Gen	$2,818,644	$46,256,811	6.09%	$1,845,158	14,353	$128.56
	Mean		2.24%			$45.24
	25th Percentile		1.64%			$34.85
	50th Percentile		1.94%			$40.69
	75th Percentile		2.46%			$47.14
	Multi Site 25th Percentile		1.55%			$31.34
	Multi Site 50th Percentile		1.89%			$39.56
	Northern/Sole 25th Percentile		1.78%			$38.68
	Northern/Sole 50th Percentile		1.91%			$41.87

Bio-Medical Engineering

Exhibit 48: Bio-Medical Engineering Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*Net Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Cases*
Credit Valley	$261,428	$104,597,499	0.25%	$117,716	25,163	$4.68
Royal Victoria	$189,603	$68,972,414	0.27%	$103,204	21,320	$4.84
Rouge Valley	$314,299	$119,174,980	0.26%	$175,922	36,006	$4.89
Lakeridge	$394,083	$146,962,230	0.27%	$200,086	38,210	$5.25
Trillium	$469,296	$148,861,997	0.32%	$247,238	41,155	$6.01
Humber River	$445,709	$129,418,034	0.34%	$275,194	45,482	$6.05
William Osler	$578,465	$169,794,773	0.34%	$335,478	52,792	$6.36
Windsor Reg	$560,125	$175,625,472	0.32%	$364,655	50,945	$7.16
St. Joseph - Ham	$454,469	$127,849,611	0.36%	$264,052	36,463	$7.24
Thunder Bay Reg	$416,927	$88,134,659	0.47%	$268,673	27,805	$9.65
Grand River	$540,437	$92,255,097	0.59%	$250,266	24,320	$10.29
Sault Area Hosps	$394,524	$65,124,559	0.61%	$203,486	17,832	$11.41
Kingston Gen	$944,858	$129,668,606	0.73%	$697,070	37,416	$18.63
HRSRH	**$1,970,363**	**$152,284,309**	**1.29%**	**$1,261,397**	**37,458**	**$33.67**
	Mean		0.46%			$9.72
	25th Percentile		0.28%			$5.44
	50th Percentile		0.34%			$6.70
	75th Percentile		0.50%			$10.13
	Multi Site 25th Percentile		0.32%			$6.05
	Multi Site 50th Percentile		0.34%			$7.16
	Northern/Sole 25th Percentile		0.40%			$8.39
	Northern/Sole 50th Percentile		0.59%			$10.29

Check that numbers match with the table used in the departmental chapter, since had been modified several times

Exhibit 49: HRSRH Equipment Expense Trends (1997/98 to 2000/01)

Expenses Type	**1997/98**	**1998/99**	**1999/2000**	**2000/01**
Bio-Medical Engineering	1,536,728	1,379,212	1,601,912	1,418,290
External Maintenance	2,660,458	2,188,458	2,486,545	3,512,458
Parts Replacement	28,828	72,483	486	1,126
Amortization	3,112,399	4,067,492	6,228,879	6,457,470
Equipment Purchases	332,985	375,163	473,957	432,797
Rental/Lease/Loans	200,763	125,388	192,065	345,655
Total	7,872,161	8,208,196	10,983,844	12,167,796

Appendix XI: Detailed Financial Benchmarking Results

Exhibit 50: Equipment Maintenance as a % of Net Direct Expenses Comparison (2000/01)

Hospital	External Maintenance	Bio-Medical Engineering (incl. Parts Replacement)	Total Maintenance	Direct Net Expenses	Equip Maintenance as a % of Net Direct Expenses
Credit Valley	1,925,572	267,810	2,193,382	104,597,499	2.10%
Sault Area Hosps	1,224,673	185,198	1,409,871	65,124,319	2.16%
Grand River	1,713,574	307,986	2,021,560	92,255,697	2.19%
Peterborough Civ	1,841,677	18,972	1,860,649	81,390,589	2.29%
Royal Victoria	1,641,282	6,802	1,648,084	68,972,414	2.39%
Windsor Reg	3,623,074	609,538	4,232,612	175,625,472	2.41%
Humber River	3,120,879	467,946	3,588,825	129,418,054	2.77%
Rouge Valley	3,195,275	304,642	3,499,917	119,174,989	2.94%
William Osler	4,319,508	684,376	5,003,884	169,794,773	2.95%
Trillium	4,065,076	422,785	4,487,861	148,861,997	3.01%
Thunder Bay Reg	2,314,605	426,968	2,741,573	88,134,859	3.11%
North Bay Gen	1,457,394	-3,033	1,454,361	46,256,811	3.14%
HRSRH	**3,512,458**	**1,419,416**	**4,931,874**	**152,284,309**	**3.24%**
Lakeridge	3,868,031	1,029,613	4,897,644	146,962,230	3.33%
Kingston Gen	3,326,785	1,548,128	4,874,913	129,669,606	3.76%
North York Gen	5,293,237	0	5,293,237	126,463,730	4.19%
St. Joseph - Ham	5,635,986	468,069	6,104,055	127,849,613	4.77%
				25th %ile	2.39%
				Median	2.95%
				75th %ile	3.24%

Registration (Admitting)

Exhibit 51: Registration Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

Facility/Peergroup	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Total Direct Net Expenses*	*% Functional Centre Expenses / Total Direct Expenses*	*2000/2001 Functional Centre Stats Net Expenses*	*2000/2001 Weighted Cases*	*Expenses / Weighted Cases*
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HRSRH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	Northern Tele 25th Percentile		[illegible]			[illegible]
	Northern Tele 50th Percentile		[illegible]			[illegible]

Appendix XI: Detailed Financial Benchmarking Results

Exhibit [illegible]: Equipment Maintenance as a % of Net Direct Expense Comparison ([illegible])

Hospital	External Maintenance	Bio-Medical Engineering (incl. Parts Replacement)	Total Maintenance	Direct Nett Expense	Equip Maintenance as a % of Net Direct Expense
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civic	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HRSRH	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	0	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]
				Median	[illegible]
				[illegible]	[illegible]

Registration (Admitting)

[illegible]

Health Records

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Food Services

[illegible]

[illegible]

[illegible]

Health Records

Exhibit [illegible]: Health Records Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Weighted Case (2000/01)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

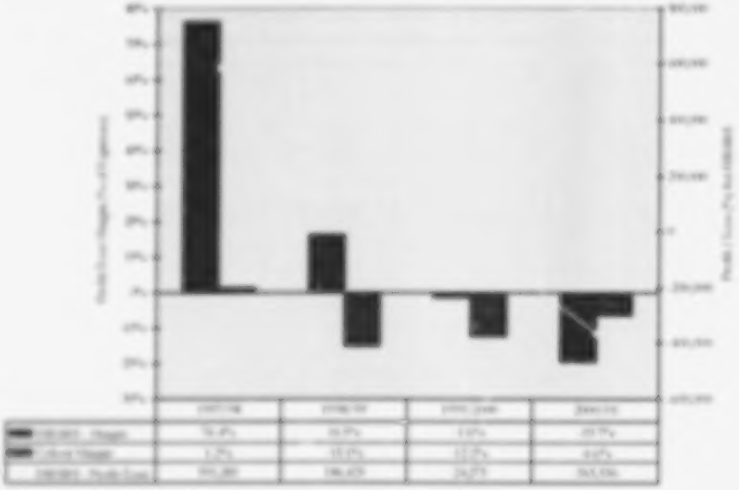
Food Services

Exhibit 33: Food Services Functional Centre Benchmarking – Expenses Over Hospital Direct Expenses and Expenses per Patient Meal Day (2000/01)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

March 18 Food services graphs and Excel tables for food services were blank because of lost cell references

Exhibit 56: Non Patient Food Services Profit & Loss – HRSRH vs Cohort - 1997/98 to 2000/01



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Nursing Inpatient Functional Centres

Medical/Surgical Nursing Functional Centres

Exhibit 55: Inpatient Nursing Medical/Surgical Units Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	-$137,882	115,270	-$1.20	-$1.22	-$1.02	-$0.82
MOS Compensation	$1,780,738	115,270	$15.45	$13.48	$15.04	$17.03
UPP Compensation	$22,127,790	115,270	$191.96	$177.72	$187.41	$199.06
Total Compensation	$23,908,528	115,270	$207.41	$191.34	$199.44	$209.80
Supplies	$1,180,310	115,270	$10.24	$9.63	$10.24	$10.83
Sundry	$9,208	115,270	$0.08	$0.21	$0.44	$1.15
Equipment	$32,225	115,270	$0.28	$0.51	$0.79	$1.07
Referred Out	$643,962	115,270	$5.59	$0.06	$0.22	$4.44
Total	$25,636,351	115,270	$222.40	$205.21	$215.75	$226.30

Exhibit 56: Inpatient Nursing Medical/Surgical Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Royal Victoria	$8,204,041	47,173	$173.91	$8,204,041	10,400,859	$0.79
Credit Valley	$11,457,622	65,452	$175.05	$11,457,622	14,919,748	$0.77
Sault Area Hosps	$9,911,564	48,770	$203.23	$9,911,564	13,653,095	$0.73
Windsor Reg	$26,635,265	130,508	$204.09	$26,635,265	31,507,227	$0.85
Thunder Bay Reg	$17,828,305	86,878	$205.21	$17,828,305	28,971,844	$0.62
Humber River	$25,738,471	124,777	$206.28	$25,738,471	29,225,202	$0.88
Grand River	$9,575,977	45,709	$209.50	$9,575,977	11,350,416	$0.84
William Osler	$28,080,147	130,314	$215.48	$28,080,147	30,365,875	$0.92
Trillium	$20,925,044	96,987	$215.75	$20,925,044	23,925,817	$0.87
Rouge Valley	$17,803,495	80,585	$220.93	$17,803,495	15,144,660	$1.18
HRSRH	**$25,547,684**	**115,270**	**$221.63**	**$25,547,684**	**31,503,619**	**$0.81**
North Bay Gen	$12,110,395	53,782	$225.18	$12,110,395	13,357,755	$0.91
Kingston Gen	$24,682,788	109,069	$226.30	$24,682,788	28,081,601	$0.88
Peterborough Civ	$12,665,880	54,352	$233.03	$12,665,880	14,560,907	$0.87
Lakeridge	$24,624,981	105,007	$234.51	$24,624,981	32,678,353	$0.75
North York Gen	$20,936,133	82,631	$253.37	$20,936,133	26,368,558	$0.79
St. Joseph - Ham	$20,982,875	82,790	$253.45	$20,982,875	22,119,552	$0.95
	Mean		$216.29			$0.85
	25th Percentile		$205.21			$0.79
	50th Percentile		$215.75			$0.85
	75th Percentile		$226.30			$0.88
	Multi Site 25th Percentile		$207.08			$0.80
	Multi Site 50th Percentile		$218.34			$0.86
	Northern/Sole 25th Percentile		$204.09			$0.79
	Northern/Sole 50th Percentile		$209.50			$0.84

Nursing Inpatient Functional Centres

Medical/Surgical Nursing Functional Centres

Exhibit 55: Inpatient Nursing Medical/Surgical Units Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	-$137,882	115,270	-$1.20	-$1.22	-$1.02	-$0.82
MOS Compensation	$1,780,738	115,270	$15.45	$13.48	$15.04	$17.03
UPP Compensation	$22,127,790	115,270	$191.96	$177.72	$187.41	$199.06
Total Compensation	$23,908,528	115,270	$207.41	$191.34	$199.44	$209.80
Supplies	$1,180,310	115,270	$10.24	$9.63	$10.24	$10.83
Sundry	$9,208	115,270	$0.08	$0.21	$0.44	$1.15
Equipment	$32,225	115,270	$0.28	$0.51	$0.79	$1.07
Referred Out	$643,962	115,270	$5.59	$0.06	$0.22	$4.44
Total	$25,636,351	115,270	$222.40	$205.21	$215.75	$226.30

Exhibit 56: Inpatient Nursing Medical/Surgical Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Royal Victoria	$8,204,041	47,173	$173.91	$8,204,041	10,400,859	$0.79
Credit Valley	$11,457,622	65,452	$175.05	$11,457,622	14,919,740	$0.77
Sault Area Hosps	$9,911,564	48,770	$203.23	$9,911,564	13,653,095	$0.73
Windsor Reg	$26,635,265	130,508	$204.09	$26,635,265	31,307,227	$0.85
Thunder Bay Reg	$17,828,305	86,878	$205.21	$17,828,305	28,971,844	$0.62
Humber River	$25,738,471	124,777	$206.28	$25,738,471	29,225,202	$0.88
Grand River	$9,575,977	45,709	$209.50	$9,575,977	11,350,416	$0.84
William Osler	$28,080,147	130,314	$215.48	$28,080,147	30,365,875	$0.92
Trillium	$20,925,044	96,987	$215.75	$20,925,044	23,925,817	$0.87
Rouge Valley	$17,803,495	80,585	$220.93	$17,803,495	15,144,664	$1.18
HRSRH	**$25,547,684**	**115,270**	**$221.63**	**$25,547,684**	**31,503,619**	**$0.81**
North Bay Gen	$12,110,395	53,782	$225.18	$12,110,395	13,357,755	$0.91
Kingston Gen	$24,682,788	109,069	$226.30	$24,682,788	28,081,601	$0.88
Peterborough Ctr	$12,665,880	54,352	$233.03	$12,665,880	14,560,907	$0.87
Lakeridge	$24,624,981	105,007	$234.51	$24,624,981	32,678,353	$0.75
North York Gen	$20,936,133	82,631	$253.37	$20,936,133	26,368,558	$0.79
St. Joseph - Ham	$20,982,875	82,790	$253.45	$20,982,875	22,119,552	$0.95
	Mean		$216.29			$0.85
	25th Percentile		$205.21			$0.79
	50th Percentile		$215.75			$0.85
	75th Percentile		$226.30			$0.88
	Multi Site 25th Percentile		$207.08			$0.80
	Multi Site 50th Percentile		$218.34			$0.86
	Northern/Sole 25th Percentile		$204.09			$0.79
	Northern/Sole 50th Percentile		$209.50			$0.84

Intensive Care Units

Exhibit 57: Intensive Care Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Sault Area Hosps	$5,556,954	9,678	$571.67	$5,556,954	5,089,925	$0.97
North Bay Gen	$2,585,640	3,956	$653.60	$2,585,640	2,080,540	$1.24
North York Gen	$7,579,850	11,405	$664.57	$7,579,850	8,302,440	$0.91
Thunder Bay Reg	$6,453,013	9,110	$709.44	$6,453,013	5,917,050	$1.09
Lakeridge	$7,063,520	9,475	$745.49	$7,063,520	6,550,150	$1.08
Rouge Valley	$8,576,504	11,460	$747.62	$8,576,504	5,950,940	$1.44
Peterborough Co	$3,914,211	5,200	$752.87	$3,914,211	3,908,540	$1.00
Royal Victoria	$3,433,957	4,300	$798.59	$3,433,957	2,315,557	$1.48
Windsor Reg	$12,999,834	16,199	$802.51	$12,999,834	12,162,425	$1.07
Credit Valley	$3,080,503	3,750	$819.84	$3,080,503	2,771,402	$1.11
Grand River	$3,253,612	3,950	$823.74	$3,253,612	3,196,252	$1.02
HRSRH	**$12,224,695**	**14,700**	**$831.61**	**$12,224,695**	**14,058,513**	**$0.87**
William Osler	$8,899,059	10,208	$871.82	$8,899,059	8,883,972	$1.00
Trillium	$7,637,046	8,596	$888.44	$7,637,046	6,096,252	$1.25
Kingston Gen	$14,585,530	16,087	$906.70	$14,585,530	13,126,664	$1.11
St. Joseph's - Ham	$7,720,844	7,850	$983.48	$7,720,844	7,704,711	$1.00
Humber River	$5,766,088	5,801	$993.98	$5,766,088	5,153,263	$1.12
	Mean		$797.50			$1.04
	25th Percentile		$745.49			$1.00
	50th Percentile		$802.51			$1.02
	75th Percentile		$871.82			$1.14
	Multi Site 25th Percentile		$718.56			$0.98
	Multi Site 50th Percentile		$777.25			$1.02
	Northern/Sole 25th Percentile		$709.44			$0.97
	Northern/Sole 50th Percentile		$736.95			$1.02

Exhibit 58: Intensive Care Units (Including Cardiac ICU) Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	-$7,047	14,700	-$0.48	-$2.05	-$0.83	-$0.29
MOS Compensation	$446,475	14,700	$30.37	$30.59	$45.44	$50.67
UPP Compensation	$10,894,346	14,700	$741.11	$643.62	$690.97	$740.63
Total Compensation	$11,340,821	14,700	$771.48	$680.70	$733.45	$782.27
Supplies	$746,225	14,700	$50.76	$38.62	$50.77	$71.39
Sundry	$12,045	14,700	$0.82	$0.54	$1.05	$2.71
Equipment	$7,861	14,700	$0.53	$1.03	$2.56	$4.26
Referred Out	$144,955	14,700	$9.86	$3.41	$7.72	$10.04
Total	$12,244,850	14,700	$832.43	$745.49	$802.51	$871.82

Exhibit 59: Intensive Care Units (Excluding Cardiac ICU) Benchmarking by Cost Category (2000/01)

Expense Type	*[illegible] 00/01 Expenses*	*00/01 Patient Days*	*00/01 Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MOS Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Referred Out	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Operating Room and Recovery Room

Exhibit 60: Operating Room and Recovery Room Functional Centre Benchmarking – Expenses per Surgical Case and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Surgical Cases*	*Net Functional Centre Expenses / Surgical Case*	*2000/2001 Functional Centre Total Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Co	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	Northern/Sole 25th Percentile		[illegible]			[illegible]
	Northern/Sole 50th Percentile		[illegible]			[illegible]

Intensive Care Units

Exhibit 57: Intensive Care Functional Centre Benchmarking - Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	2000/2001 Functional Centre Total Expenses	2000/2001 Patient Days	Total Functional Centre Expenses / Patient Days	2000/2001 Functional Centre Total Expenses	2000/2001 Workload Units	Expenses / Workload Unit
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Exhibit 58: Intensive Care Units (Including Cardiac ICU) Benchmarking by Cost Category (2000/01)

Expense Type	2000/01 Expenses	2000/01 Patient Days	2000/01 Expense/ Patient Day	25th Percentile	Median	75th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Appendix VII - Detailed Financial Benchmarking Results

Exhibit [illegible]: Intensive Care Units (Excluding Cardiac ICU) Benchmarking by Cost Category (2000/01)

[illegible]	[illegible]	[illegible]	[illegible]	25th Percentile	Median	75th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Operating Room and Recovery Room

Exhibit [illegible]: Operating Room and Recovery Room Functional Centre Benchmarking – Expense per Surgical Case and Expense per Workload Unit (2000/01)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
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Obstetrics Nursing Functional Centre

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Appendix [illegible]: Detailed Financial Benchmarking Results

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Paediatric Nursing Functional Centre

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Exhibit 61 Operating Room/Recovery Room Department and Day Surgery Benchmarking by Cost Category (2000/01)

Expense Type	2000/01 Expenses	[illegible]	2000/01 [illegible]	25th Percentile	Median	75th Percentile
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MOS Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Obstetrics Nursing Functional Centre

Exhibit 62: Obstetrics Nursing Functional Centre Benchmarking - Expenses per Patient Day and Expenses per Workload Unit (2000/01)

[illegible]	2000/2001 Functional Centre Total Expenses	2000/2001 Patient Days	[illegible] per Patient Day	2000/2001 Functional Centre Total Expenses	2000/2001 Workload Units	Expense per Workload Unit
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 75th Percentile		[illegible]			[illegible]
	Workload Unit 25th Percentile		[illegible]			[illegible]
	Workload Unit 75th Percentile		[illegible]			[illegible]

Exhibit 63: Obstetrics Unit Benchmarking by Cost Category (2000/01)

Expense Type	[illegible] Expenses	[illegible] Patient Days	[illegible] Cost per Patient Day	25th Percentile	Median	75th Percentile
[illegible] Recoveries	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MOS Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Pediatric Nursing Functional Centre

Exhibit 64: Pediatric Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

[illegible]	2000/2001 Functional Centre Net Expenses	2000/2001 Patient Days	Net Functional Centre Expenses / Patient Days	2000/2001 Functional Centre Unit Net Expenses	2000/2001 Workload Units	Expenses / Workload Unit
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Patient Day 25th Percentile		[illegible]			[illegible]
	Patient Day 50th Percentile		[illegible]			[illegible]
	Workload Unit 25th Percentile		[illegible]			[illegible]
	Workload Unit 50th Percentile		[illegible]			[illegible]

Exhibit 65: Pediatric Unit Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	$11,340,821	14,710	$770.96	$689.70	$733.45	$782.27
MOS Compensation	$746,223	14,710	$50.73	$38.82	$50.73	$71.35
UPP Compensation	$12,045	14,710	$0.82	$0.58	$1.07	$2.71
Total Compensation	$7,861	14,710	$0.53	$1.83	$2.50	$4.28
Supplies	$144,955	14,710	$9.85	$3.45	$7.72	$10.04
Sundry	$12,244,858	14,710	$832.42	$745.69	$802.51	$871.82
Equipment	-$184	8,619	-$0.02	-$3.20	-$1.64	-$0.73
Referred Out	$202,458	8,619	$23.49	$26.50	$30.32	$34.13
Total	$3,491,354	8,619	$405.08	$303.24	$334.73	$348.78

Why are the patient days different in the last two rows for pediatric?
These numbers do not look right, and do not match the presentation.

Psychiatry Nursing Functional Centre

Exhibit 66: Psychiatry Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acct Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
St. Joseph's - Ham	$2,786,557	70,612	$39.47	$2,786,557	3,291,697	$0.85
Grand River	$2,355,159	16,330	$144.47	$2,355,159	2,724,104	$0.87
HRSRH	$1,540,117	8,624	$178.58	$1,540,117	1,896,155	$0.81
Trillium	$2,550,581	13,940	$182.66	$2,550,581	4,801,540	$0.53
William Osler	$5,214,075	27,866	$187.11	$5,214,075	5,444,616	$0.96
Sault Area Hosps	$1,846,322	9,206	$200.56	$1,846,322	2,207,286	$0.84
Windsor Reg	$6,204,125	30,894	$202.79	$6,204,125	8,122,770	$0.76
Credit Valley	$1,553,826	7,554	$205.70	$1,553,826	2,018,366	$0.77
Peterborough Civ	$1,998,449	9,623	$207.67	$1,998,449	2,446,275	$0.82
Rouge Valley	$3,613,242	17,249	$209.48	$3,613,242	2,881,021	$1.25
Thunder Bay Reg	$1,659,200	7,562	$213.41	$1,659,200	2,558,280	$0.66
Lakeridge	$2,791,229	12,784	$218.34	$2,791,229	3,314,374	$0.84
Humber River	$3,764,041	17,089	$220.26	$3,764,041	3,534,904	$1.06
Royal Victoria	$1,964,559	8,816	$222.84	$1,964,559	1,882,231	$1.04
North York Gen	$3,181,274	13,904	$228.77	$3,181,274	3,780,243	$0.84
	Mean		$190.82			$0.86
	25th Percentile		$184.09			$0.79
	50th Percentile		$205.70			$0.84
	75th Percentile		$215.88			$0.91
	Multi Site 25th Percentile		$186.05			$0.80
	Multi Site 50th Percentile		$205.25			$0.84
	Northern/Sole 25th Percentile		$189.57			$0.79
	Northern/Sole 50th Percentile		$202.79			$0.82

Appendix XI: Detailed Financial Benchmarking Results

Rehabilitation Nursing Functional Centre

Exhibit 67: Rehabilitation Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Sault Area Hosps	$1,123,816	7,996	$140.55	$1,123,816	1,692,985	$0.66
Royal Victoria	$793,816	5,277	$150.43	$793,816	1,150,011	$0.69
Credit Valley	$2,294,601	14,488	$158.38	$2,294,601	3,906,682	$0.59
Peterborough Civ	$1,388,976	8,008	$173.45	$1,388,976	1,858,994	$0.75
Rouge Valley	$2,182,688	12,522	$174.31	$2,182,688	1,399,920	$1.56
Lakeridge	$3,817,403	20,731	$184.14	$3,817,403	4,014,631	$0.95
Windsor Reg	$2,950,612	15,465	$190.79	$2,950,612	3,652,600	$0.81
St. Joseph - Ham	$1,566,569	7,936	$197.40	$1,566,569	1,691,442	$0.93
Grand River	$2,302,659	11,574	$198.95	$2,302,659	3,054,766	$0.75
Trillium	$3,759,836	18,694	$201.13	$3,759,836	5,523,666	$0.68
HRSRH	$1,302,218	6,337	$205.49	$1,302,218	1,218,596	$1.07
William Osler	$969,835	3,518	$275.68	$969,835	1,290,263	$0.75
North York Gen	$2,521,960	7,650	$329.67	$2,521,960	563,994	$4.47
	Mean		$198.49			$1.13
	25th Percentile		$173.45			$0.69
	50th Percentile		$190.79			$0.75
	75th Percentile		$201.13			$0.95
	Multi Site 25th Percentile		$176.77			$0.75
	Multi Site 50th Percentile		$194.87			$0.78
	Northern/Sole 25th Percentile		$156.18			$0.70
	Northern/Sole 50th Percentile		$182.12			$0.75

Exhibit 68: Rehabilitation Unit Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	$0	8,624	$0.00	$0.00	$0.00	$0.00
MOS Compensation	$81,654	6,337	$12.89	$11.15	$14.08	$15.39
UPP Compensation	$1,081,432	6,337	$170.65	$151.10	$160.43	$175.66
Total Compensation	$1,163,086	6,337	$183.54	$166.24	$178.75	$183.59
Supplies	$35,248	6,337	$5.56	$5.56	$6.04	$8.40
Sundry	$4,142	6,337	$0.65	$0.42	$0.65	$1.00
Equipment	$838	6,337	$0.13	$0.22	$1.01	$3.11
Referred Out	$101,213	6,337	$15.97	$0.07	$1.94	$3.77
Total	$1,304,527	6,337	$205.86	$173.45	$190.79	$201.13

The number of patient days for rehab do not look right for allowable recoveries. This table matches the one in the presentation

Exhibit 65: Pediatric Unit Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	$11,340,821	14,710	$770.96	$689.70	$733.45	$782.27
MOS Compensation	$746,223	14,710	$50.73	$38.82	$50.73	$71.35
UPP Compensation	$12,045	14,710	$0.82	$0.58	$1.07	$2.71
Total Compensation	$7,861	14,710	$0.53	$1.83	$2.50	$4.28
Supplies	$144,955	14,710	$9.85	$3.45	$7.72	$10.04
Sundry	$12,244,858	14,710	$832.42	$745.69	$802.51	$871.82
Equipment	-$184	8,619	-$0.02	-$3.20	-$1.64	-$0.73
Referred Out	$202,458	8,619	$23.49	$26.50	$30.32	$34.13
Total	$3,491,354	8,619	$405.08	$303.24	$334.73	$348.78

Why are the patient days different in the last two rows for pediatric?

These numbers do not look right, and do not match the presentation.

Psychiatry Nursing Functional Centre

Exhibit 66: Psychiatry Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
St. Joseph - Ham	$2,786,937	70,612	$39.47	$2,786,937	3,291,697	$0.85
Grand River	$2,359,199	16,330	$144.47	$2,359,199	2,724,104	$0.87
HRSRH	**$1,540,117**	**8,624**	**$178.58**	**$1,540,117**	**1,896,133**	**$0.81**
Trillium	$2,550,581	13,948	$182.86	$2,550,581	4,801,540	$0.53
William Osler	$5,214,075	27,866	$187.11	$5,214,075	5,444,616	$0.96
Sault Area Hosps	$1,846,322	9,206	$200.56	$1,846,322	2,207,286	$0.84
Windsor Reg	$6,204,125	30,594	$202.79	$6,204,125	8,122,778	$0.76
Credit Valley	$1,553,826	7,554	$205.70	$1,553,826	2,018,306	$0.77
Peterborough Civ	$1,998,449	9,623	$207.67	$1,998,449	2,446,279	$0.82
Rouge Valley	$3,613,242	17,249	$209.48	$3,613,242	2,881,020	$1.25
Thunder Bay Reg	$1,699,200	7,962	$213.41	$1,699,200	2,558,280	$0.66
Lakeridge	$2,791,229	12,784	$218.34	$2,791,229	3,314,374	$0.84
Humber River	$3,764,041	17,089	$220.26	$3,764,041	3,534,904	$1.06
Royal Victoria	$1,964,539	8,816	$222.84	$1,964,539	1,882,231	$1.04
North York Gen	$3,181,274	13,906	$228.77	$3,181,274	3,780,243	$0.84
	Mean		$190.82			$0.86
	25th Percentile		$184.99			$0.79
	50th Percentile		$205.70			$0.84
	75th Percentile		$215.88			$0.91
	Multi Site 25th Percentile		$186.05			$0.80
	Multi Site 50th Percentile		$205.23			$0.84
	Northern/Sole 25th Percentile		$189.57			$0.79
	Northern/Sole 50th Percentile		$202.79			$0.82

Rehabilitation Nursing Functional Centre

Exhibit 67: Rehabilitation Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Sault Area Hosps	$1,123,816	7,996	$140.55	$1,123,816	1,692,985	$0.66
Royal Victoria	$793,816	5,277	$150.43	$793,816	1,150,011	$0.69
Credit Valley	$2,294,601	14,488	$158.38	$2,294,601	3,906,682	$0.59
Peterborough Civ	$1,388,976	8,008	$173.45	$1,388,976	1,858,994	$0.75
Rouge Valley	$2,182,688	12,522	$174.31	$2,182,688	1,399,920	$1.56
Lakeridge	$3,817,403	20,731	$184.14	$3,817,403	4,014,631	$0.95
Windsor Reg	$2,950,612	15,465	$190.79	$2,950,612	3,652,600	$0.81
St. Joseph - Ham	$1,566,569	7,936	$197.40	$1,566,569	1,691,442	$0.93
Grand River	$2,302,659	11,574	$198.95	$2,302,659	3,054,766	$0.75
Trillium	$3,759,836	18,694	$201.13	$3,759,836	5,523,666	$0.68
HRSRH	**$1,302,218**	**6,337**	**$205.49**	**$1,302,218**	**1,218,596**	**$1.07**
William Osler	$969,835	3,518	$275.68	$969,835	1,290,263	$0.75
North York Gen	$2,521,960	7,650	$329.67	$2,521,960	563,994	$4.47
	Mean		$198.49			$1.13
	25th Percentile		$173.45			$0.69
	50th Percentile		$190.79			$0.75
	75th Percentile		$201.13			$0.95
	Multi Site 25th Percentile		$176.77			$0.75
	Multi Site 50th Percentile		$194.87			$0.78
	Northern/Sole 25th Percentile		$156.18			$0.70
	Northern/Sole 50th Percentile		$182.12			$0.75

Exhibit 68: Rehabilitation Unit Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Patient Days*	*HRSRH Cost per Patient Day*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	$0	8,624	$0.00	$0.00	$0.00	$0.00
MOS Compensation	$81,654	6,337	$12.89	$11.15	$14.08	$15.39
UPP Compensation	$1,081,432	6,337	$170.65	$151.10	$160.43	$175.66
Total Compensation	$1,163,086	6,337	$183.54	$166.24	$178.75	$183.59
Supplies	$35,248	6,337	$5.56	$5.56	$6.04	$8.40
Sundry	$4,142	6,337	$0.65	$0.42	$0.65	$1.00
Equipment	$838	6,337	$0.13	$0.22	$1.01	$3.11
Referred Out	$101,213	6,337	$15.97	$0.07	$1.94	$3.77
Total	$1,304,527	6,337	$205.86	$173.45	$190.79	$201.13

The number of patient days for rehab do not look right for allowable recoveries. This table matches the one in the presentation

Chronic Care Nursing Functional Centre

Exhibit 69: Chronic Care Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Net Functional Centre Expenses / Patient Days*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Royal Victoria	$1,854,083	14,544	$127.48	$1,854,083	3,243,233	$0.57
Rouge Valley	$4,200,683	28,398	$147.92	$4,200,683	4,568,460	$0.92
Trillium	$11,662,268	75,065	$155.36	$11,662,268	3,546,253	$3.29
Lakeridge	$8,234,885	50,172	$164.13	$8,234,885	11,869,330	$0.69
Sault Area Hosps	$2,881,049	17,453	$165.07	$2,881,049	4,801,321	$0.60
Grand River	$10,797,091	65,267	$165.43	$10,797,091	15,040,525	$0.72
HRSRH	**$3,128,711**	**18,152**	**$172.36**	**$3,128,711**	**4,149,867**	**$0.75**
Credit Valley	$2,533,919	14,568	$173.94	$2,533,919	4,369,063	$0.58
Windsor Reg	$4,361,605	24,749	$176.23	$4,361,605	5,636,765	$0.77
St. Joseph - Ham	$1,634,669	8,955	$182.54	$1,634,669	2,303,978	$0.71
William Osler	$6,028,300	29,337	$205.48	$6,028,300	7,061,876	$0.85
Peterborough Civ	$3,038,415	13,403	$226.70	$3,038,415	4,708,737	$0.65
	Mean		$171.89			$0.93
	25th Percentile		$161.94			$0.63
	50th Percentile		$168.90			$0.71
	75th Percentile		$177.81			$0.79
	Multi Site 25th Percentile		$164.13			$0.69
	Multi Site 50th Percentile		$165.43			$0.75
	Northern/Sole 25th Percentile		$165.16			$0.61
	Northern/Sole 50th Percentile		$168.90			$0.68

Exhibit 70: Chronic Care Unit Benchmarking – Net Expenses per RUGs Weighted Day (2000/01)

Multi-Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Patient Days*	*Expenses per Patient Day*	*2000/2001 RUGs Wighted Days*	*Expenses per RUGs Wtd Day*
No	Yes	Royal Victoria	$1,854,083	14,544	$127.48	15,018	**$123.46**
Yes	No	Rouge Valley	$4,200,683	28,398	$147.92	32,025	**$131.17**
Yes	Yes	Sault Area Hosps	$2,881,049	17,453	$165.07	21,001	**$137.18**
Yes	No	Lakeridge	$8,234,885	50,172	$164.13	54,422	**$151.31**
Yes	No	Trillium	$11,662,268	75,065	$155.36	76,656	**$152.14**
Yes	Yes	Grand River	$10,797,091	65,267	$165.43	69,142	**$156.16**
Yes	**Yes**	**HRSRH**	**$3,128,711**	**18,152**	**$172.36**	**19,685**	**$158.94**
Yes	Yes	Windsor Reg	$4,361,605	24,749	$176.23	25,900	**$168.40**
No	No	St. Joseph - Ham	$1,634,669	8,955	$182.54	9,274	**$176.26**
Yes	Yes	Peterborough Civ	$3,038,415	13,403	$226.70	15,896	**$191.14**
Yes	No	William Osler	$6,028,300	29,337	$205.48	31,510	**$191.31**
No	No	Credit Valley	$2,533,919	14,568	$173.94	12,710	**$199.36**
			Mean		$171.89		$161.40
			25th Percentile		$161.94		$147.78
			50th Percentile		$168.90		$157.55
			75th Percentile		$177.81		$179.98
			Multi Site 25th Percentile		$164.13		$151.31
			Multi Site 50th Percentile		$165.43		$156.16
			Northern/Sole 25th Percentile		$165.16		$141.93
			Northern/Sole 50th Percentile		$168.90		$157.55

Ambulatory Care Functional Centres

Emergency

Exhibit 71: Emergency Functional Centre Benchmarking – Expenses per Visit and Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Visits*	*Net Functional Centre Expenses / Visits*	*2000/2001 Workload Units*	*Expenses/ Workload Unit*
Sault Area Hosps	$4,577,230	$76,369	$59.94	$5,749,940	$0.80
North Bay Gen	$2,720,442	41,347	$65.80	2,346,208	$1.16
Lakeridge	$10,370,720	152,296	$68.10	10,816,120	$0.96
Grand River	$3,600,946	50,346	$71.52	3,589,469	$1.00
Peterborough Cir	$5,133,993	70,456	$72.87	4,847,086	$1.06
William Osler	$12,756,053	163,573	$77.98	11,362,000	$1.12
Royal Victoria	$5,439,641	69,744	$77.99	4,339,961	$1.25
Thunder Bay Reg	$7,003,390	82,892	$84.49	6,321,846	$1.11
HRSRH	**$5,341,817**	**60,424**	**$88.41**	**5,540,688**	**$0.96**
Trillium	$8,948,200	101,156	$88.46	9,174,262	$0.98
Credit Valley	$6,244,807	65,087	$95.95	6,075,802	$1.04
North York Gen	$8,690,614	93,275	$93.17	9,291,259	$0.94
Rouge Valley	$8,297,570	88,863	$93.37	5,210,880	$1.59
Windsor Reg	$9,387,429	99,328	$94.51	8,561,344	$1.10
Humber River	$9,659,449	100,178	$96.42	10,382,467	$0.93
St. Joseph - Ham	$4,493,114	47,403	$94.79	5,814,667	$0.92
Kingston Gen	$5,717,913	52,014	$109.93	4,554,863	$1.26
	Mean		$84.33		$1.07
	25th Percentile		$72.87		$0.96
	50th Percentile		$88.41		$1.04
	75th Percentile		$94.51		$1.12
	Multi Site 25th Percentile		$71.86		$0.96
	Multi Site 50th Percentile		$86.45		$1.03
	Northern/Sole 25th Percentile		$71.52		$1.00
	Northern/Sole 50th Percentile		$77.99		$1.10

Chronic Care Nursing Functional Centre

Exhibit 69: Chronic Care Nursing Functional Centre Benchmarking – Expenses per Patient Day and Expenses per Workload Unit (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Patient Days	Net Functional Centre Expenses / Patient Days	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Expenses/ Workload Unit
Royal Victoria	$1,854,083	14,544	$127.49	$1,854,083	3,245,255	$0.57
Rouge Valley	$4,219,085	28,598	$147.52	$4,219,085	4,508,400	$0.94
Trillium	$11,662,268	75,063	$155.36	$11,662,268	5,540,255	$2.10
Lakeridge	$8,234,085	50,172	$164.15	$8,234,085	11,865,550	$0.69
Sault Area Hosps	$2,883,040	17,455	$165.07	$2,883,040	4,601,525	$0.63
Grand River	$10,797,058	65,267	$165.43	$10,797,058	15,080,525	$0.72
HRSRH	**$3,128,711**	**18,152**	**$172.36**	**$3,128,711**	**4,105,867**	**$0.76**
Credit Valley	$2,535,919	14,508	$173.56	$2,535,919	4,501,015	$0.56
Windsor Reg	$4,361,095	24,749	$176.23	$4,361,095	5,630,705	$0.77
St. Joseph - Ham	$1,634,603	8,953	$182.54	$1,634,603	2,305,076	$0.71
William Osler	$6,028,560	29,537	$205.40	$6,028,560	7,083,676	$0.85
Peterborough Civ	$3,056,415	13,405	$226.76	$3,056,415	4,708,757	$0.65
	Mean		$171.89			$0.85
	25th Percentile		$161.56			$0.63
	50th Percentile		$168.90			$0.71
	75th Percentile		$177.61			$0.76
	Multi-Site 25th Percentile		$164.15			$0.65
	Multi-Site 50th Percentile		$165.45			$0.72
	Northern/Sole 25th Percentile		$163.56			$0.61
	Northern/Sole 50th Percentile		$168.90			$0.69

Exhibit 70: Chronic Care Unit Benchmarking – Net Expenses per RUGs Weighted Day (2000/01)

Multi Site	Northern / Sole Provider	Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Patient Days	Expenses per Patient Day	2000/2001 RUGs Weighted Days	Expenses per RUGs Weighted Day
No	Yes	Royal Victoria	$1,854,083	14,544	$127.49	15,030	$123.40
Yes	No	Rouge Valley	$4,219,085	28,598	$147.52	32,026	$131.55
Yes	Yes	Sault Area Hosps	$2,883,040	17,455	$165.07	21,006	$137.30
Yes	No	Lakeridge	$8,234,085	50,172	$164.15	54,637	$151.20
Yes	No	Trillium	$11,662,268	75,063	$155.36	76,030	$152.94
Yes	Yes	Grand River	$10,797,058	65,267	$165.43	69,103	$156.38
Yes	**Yes**	**HRSRH**	**$3,128,711**	**18,152**	**$172.36**	**19,085**	**$158.46**
Yes	Yes	Windsor Reg	$4,361,095	24,749	$176.23	25,994	$168.40
No	No	St. Joseph - Ham	$1,634,603	8,953	$182.54	9,274	$176.26
Yes	Yes	Peterborough Civ	$3,056,415	13,405	$226.76	16,890	$181.14
Yes	No	William Osler	$6,028,560	29,537	$205.40	31,100	$184.20
No	No	Credit Valley	$2,535,919	14,508	$173.56	13,750	$186.36
			Mean		$171.89		$161.80
			25th Percentile		$161.56		$147.70
			50th Percentile		$168.90		$157.32
			75th Percentile		$177.61		$170.58
			Multi-Site 25th Percentile		$164.15		$150.70
			Multi-Site 50th Percentile		$165.45		$156.38
			Northern/Sole 25th Percentile		$163.56		$140.37
			Northern/Sole 50th Percentile		$168.90		$157.32

Ambulatory Care Functional Centres

Emergency

Exhibit 71: Emergency Functional Centre Benchmarking – Expenses per Visit and Expenses per Workload Unit (2000/01)

Facility Description	2000/2001 Functional Centre Net Expense	2000/2001 Visits	Net Functional Centre Expense / Visit	2000/2001 Workload Units	Expense / Workload Unit
Sault Area Hosps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HRSRH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]		[illegible]
	25th Percentile		[illegible]		[illegible]
	50th Percentile		[illegible]		[illegible]
	75th Percentile		[illegible]		[illegible]
	Multi-Site 25th Percentile		[illegible]		[illegible]
	Multi-Site 50th Percentile		[illegible]		[illegible]
	Northern/Sole 25th Percentile		[illegible]		[illegible]
	Northern/Sole 50th Percentile		[illegible]		[illegible]

Renal Dialysis

Exhibit 72: Renal Dialysis Benchmarking – Net Expenses per Workload Unit (2000/01)

Multi Site	[illegible]	Facility Description	2000/2001 Functional Centre Net Expenses	2000/01 Workload Units	Expenses / Workload Unit
No	No	St. Joseph's - Ham.	[illegible]	[illegible]	[illegible]
Yes	No	William Osler	[illegible]	[illegible]	[illegible]
Yes	Yes	Grand River	[illegible]	[illegible]	[illegible]
Yes	Yes	HRSRH	[illegible]	[illegible]	[illegible]
Yes	Yes	Sault Area Hosp.	[illegible]	[illegible]	[illegible]
Yes	No	Humber River	[illegible]	[illegible]	[illegible]
Yes	Yes	Thunder Bay Reg.	[illegible]	[illegible]	[illegible]
Yes	Yes	Kingston Gen.	[illegible]	[illegible]	[illegible]
Yes	Yes	North Bay Gen.	[illegible]	[illegible]	[illegible]
No	Yes	Royal Victoria	[illegible]	[illegible]	[illegible]
Yes	No	Lakeridge	[illegible]	[illegible]	[illegible]
No	No	Credit Valley	[illegible]	[illegible]	[illegible]
Yes	Yes	Windsor Reg.	[illegible]	[illegible]	[illegible]
			Mean		[illegible]
			25th Percentile		[illegible]
			50th Percentile		[illegible]
			75th Percentile		[illegible]
			Multi-Site 25th Percentile		[illegible]
			Multi-Site 50th Percentile		[illegible]
			[illegible] 25th Percentile		[illegible]
			[illegible] 50th Percentile		[illegible]

Exhibit 73: Renal Dialysis Benchmarking by Cost Category (2000/01)

Expense Type	HRSRH Expenses	HRSRH Workload	HRSRH Cost per Workload	25th Percentile	Median	75th Percentile
Allowable Recoveries	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MOS Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Medical Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Drugs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Depreciation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Referred-Out	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Buildings	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Clinics and Day/Night Care

Exhibit [illegible]: Clinics and Day/Night Care Functional Centre Benchmarking – Expenses per Visit and Expenses per Workload Unit ([illegible])

Facility Description	1999/2000 Functional Centre Net Expenses	1999/2000 Visits	Net Functional Centre Expenses / Visits	1999/2000 Workload Units	Expenses / Workload Units
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]		[illegible]
	25th Percentile		[illegible]		[illegible]
	50th Percentile		[illegible]		[illegible]
	75th Percentile		[illegible]		[illegible]
	Peer Grp 25th Percentile		[illegible]		[illegible]
	Peer Grp 75th Percentile		[illegible]		[illegible]
	[illegible] 25th Percentile		[illegible]		[illegible]
	[illegible] 75th Percentile		[illegible]		[illegible]

Appendix [illegible]: Detailed Financial Benchmarking Results

Rural Analysis

Exhibit [illegible]: [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]

Exhibit [illegible]: [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Clinics and Day/Night Care

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]
	[illegible]		[illegible]		[illegible]

Diagnostic and Therapeutic Functional Centres

Clinical Laboratory (Combined)

Exhibit 75: Clinical Laboratory (Combined) Functional Centre Benchmarking - Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

[illegible]	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Net Expenses	2000/2001 Weighted Cases	Expenses/ Weighted Case
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 75th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 75th Percentile		[illegible]			[illegible]

Exhibit 76: Clinical Laboratory Labour Productivity – Workload Units per UPP Minute (2000/01)

Multi Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Sault Area Hosp	5,532,400	6,445,200	0.86
Yes	Yes	Windsor Reg	8,487,088	9,805,440	0.87
Yes	Yes	Peterborough Civ	4,519,350	5,026,080	0.90
Yes	Yes	Thunder Bay Reg	6,364,567	6,892,680	0.92
Yes	No	Rouge Valley	5,764,241	6,144,000	0.94
Yes	Yes	Grand River	5,380,048	5,695,200	0.95
Yes	No	Trillium	8,944,178	9,417,120	0.95
Yes	No	Lakeridge	9,711,176	10,175,760	0.95
No	No	St. Joseph - Ham	12,724,505	12,558,320	1.01
No	Yes	Royal Victoria	4,545,496	4,459,200	1.02
Yes	No	North York Gen	10,413,729	9,954,300	1.05
Yes	No	William Osler	8,756,305	8,260,840	1.06
No	No	Credit Valley	11,773,024	10,786,980	1.09
Yes	Yes	HRSRH	10,484,833	9,561,420	1.10
Yes	Yes	Kingston Gen	15,145,756	13,198,440	1.15
Yes	No	Humber River	8,765,634	7,135,200	1.23
Yes	Yes	North Bay Gen	4,329,663	2,917,440	1.48
			Mean		1.03
			25th Percentile		0.94
			50th Percentile		1.01
			75th Percentile		1.09
			Multi Site 25th Percentile		0.93
			Multi Site 50th Percentile		0.95
			Northern/Sole 25th Percentile		0.90
			Northern/Sole 50th Percentile		0.95

Exhibit 77: Clinical Laboratory (Combined) Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$787,218	10,484,833	$0.08	$0.05	$0.06	$0.08
UPP Compensation	$7,252,271	10,484,833	$0.69	$0.55	$0.60	$0.62
Medical Compensation	$2,761,318	10,484,833	$0.26	$0.13	$0.16	$0.17
Total Compensation	$10,800,807	10,484,833	$1.03	$0.72	$0.80	$0.90
Supplies	$3,367,342	10,484,833	$0.32	$0.18	$0.20	$0.24
Sundry	$88,428	10,484,833	$0.01	$0.01	$0.01	$0.01
Equipment	$69,122	10,484,833	$0.01	$0.01	$0.02	$0.02
Total	$14,325,699	10,484,833	$1.37	$0.95	$1.04	$1.20

Diagnostic and Therapeutic Functional Centres

Clinical Laboratory (Combined)

Exhibit 75: Clinical Laboratory (Combined) Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses/ Weighted Case
Kingston Gen	$11,240,375	15,145,036	$0.74	$4,740,458	37,408	$125.7
Humber River	$7,855,529	8,783,654	$0.89	$2,829,206	45,372	$62.4
St. Joseph's - Ham	$11,437,455	12,724,303	$0.90	$2,621,845	36,276	$72.2
North Bay Gen	$3,912,134	4,328,065	$0.90	$1,308,747	14,333	$91.2
Sault Area Hosps	$3,199,657	3,552,644	$0.92	$1,749,020	17,829	$98.1
Credit Valley	$11,517,760	11,773,024	$0.98	$2,228,364	23,103	$96.5
Royal Victoria	$4,554,385	4,545,466	$1.00	$1,670,289	21,320	$78.3
Trillium	$9,036,300	8,944,178	$1.01	$4,475,170	41,138	$108.8
Grand River	$5,497,352	5,398,048	$1.02	$2,664,109	24,320	$109.5
Lakeridge	$9,994,302	9,714,176	$1.03	$3,974,270	38,213	$104.0
William Osler	$9,963,311	8,736,369	$1.14	$3,454,726	52,332	$66.0
North York Gen	$11,920,073	10,413,729	$1.14	$5,368,499	57,224	$93.8
Thunder Bay Reg	$7,357,354	6,364,367	$1.16	$2,732,248	27,993	$97.6
HRSRH	**$14,124,960**	**10,484,833**	**$1.35**	**$4,825,852**	**37,456**	**$128.8**
Windsor Reg	$11,742,873	8,487,000	$1.38	$4,080,155	50,945	$80.1
Rouge Valley	$8,628,350	5,764,241	$1.50	$5,794,210	56,066	$103.3
Peterborough Co	$8,898,885	4,518,394	$1.97	$4,050,370	24,041	$168.7
	Mean		$1.11			$98.4
	25th Percentile		$0.92			$80.1
	50th Percentile		$1.02			$97.9
	75th Percentile		$1.16			$108.8
	Multi Site 25th Percentile		$0.98			$88.4
	Multi Site 50th Percentile		$1.08			$103.3
	Northern/Sole 25th Percentile		$0.95			$74.6
	Northern/Sole 50th Percentile		$1.16			$109.3

Appendix XI: Detailed Financial Benchmarking Results

Exhibit 76: Clinical Laboratory Labour Productivi ty – Workload Units per UPP Minute (2000/01)

Multi-Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Sault Area Hosps	5,532,400	6,443,280	0.86
Yes	Yes	Windsor Reg	8,487,088	9,805,440	0.87
Yes	Yes	Peterborough Civ	4,518,350	5,026,080	0.90
Yes	Yes	Thunder Bay Reg	6,364,567	6,882,600	0.92
Yes	No	Rouge Valley	5,764,241	6,144,600	0.94
Yes	Yes	Grand River	5,388,048	5,689,200	0.95
Yes	No	Trillium	8,944,178	9,417,120	0.95
Yes	No	Lakeridge	9,714,176	10,191,960	0.95
No	No	St. Joseph - Ham	12,724,505	12,538,320	1.01
No	Yes	Royal Victoria	4,545,406	4,459,200	1.02
Yes	No	North York Gen	10,413,729	9,954,300	1.05
Yes	No	William Osler	8,736,305	8,268,840	1.06
No	No	Credit Valley	11,773,024	10,786,980	1.09
Yes	**Yes**	**HRSRH**	**10,484,833**	**9,561,420**	**1.10**
Yes	Yes	Kingston Gen	15,145,036	13,198,440	1.15
Yes	No	Humber River	8,783,634	7,135,200	1.23
Yes	Yes	North Bay Gen	4,328,663	2,917,440	1.48
			Mean		1.03
			25th Percentile		0.94
			50th Percentile		1.01
			75th Percentile		1.09
			Multi Site 25th Percentile		0.93
			Multi Site 50th Percentile		0.95
			Northern/Sole 25th Percentile		0.90
			Northern/Sole 50th Percentile		0.95

Exhibit 77: Clinical Laboratory (Combined) Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$787,218	10,484,833	$0.08	$0.03	$0.06	$0.08
UPP Compensation	$7,252,271	10,484,833	$0.69	$0.55	$0.60	$0.62
Medical Compensation	$2,761,318	10,484,833	$0.26	$0.13	$0.16	$0.17
Total Compensation	$10,800,807	10,484,833	$1.03	$0.72	$0.80	$0.90
Supplies	$3,367,342	10,484,833	$0.32	$0.18	$0.20	$0.24
Sundry	$88,428	10,484,833	$0.01	$0.01	$0.01	$0.01
Equipment	$69,122	10,484,833	$0.01	$0.01	$0.02	$0.02
Total	$14,325,699	10,484,833	$1.37	$0.95	$1.04	$1.20

Clinical Chemistry

Exhibit 78: Clinical Chemistry Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Humber River	$2,331,122	3,262,163	$0.71	$826,532	45,372	$18.22
Kingston Gen	$3,037,272	3,728,256	$0.81	$1,198,892	37,408	$32.05
St. Joseph - Ham	$2,108,077	2,479,439	$0.85	$21,416	36,276	$0.59
HRSRH	**$2,011,524**	**2,357,861**	**$0.85**	**$815,859**	**37,458**	**$21.78**
Credit Valley	$2,454,720	2,870,747	$0.86	$489,910	25,165	$19.47
Lakeridge	$1,929,113	2,247,754	$0.86	$717,857	38,203	$18.79
Grand River	$2,256,544	2,116,953	$1.07	$1,022,279	24,320	$42.03
William Osler	$3,083,767	2,888,254	$1.07	$968,049	52,352	$18.49
North York Gen	$2,388,662	2,070,045	$1.15	$622,377	37,224	$16.72
Royal Victoria	$1,100,049	895,386	$1.23	$363,969	21,320	$17.07
Peterborough Civ	$1,183,935	911,806	$1.30	$612,633	24,041	$25.48
Windsor Reg	$2,927,398	1,625,597	$1.80	$2,024,773	50,943	$39.75
Thunder Bay Reg	$1,919,435	1,023,033	$1.88	$718,942	27,895	$25.77
	Mean		$1.11			$22.79
	25th Percentile		$0.85			$18.22
	50th Percentile		$1.07			$19.47
	75th Percentile		$1.23			$25.77
	Multi Site 25th Percentile		$0.85			$18.57
	Multi Site 50th Percentile		$1.07			$23.63
	Northern/Sole 25th Percentile		$0.96			$23.63
	Northern/Sole 50th Percentile		$1.23			$25.77

Haematology

Exhibit 79: Haematology Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Kingston Gen	$1,439,253	2,623,266	$0.55	$795,088	37,408	$21.25
Humber River	$965,006	1,605,853	$0.60	$402,962	45,372	$8.88
Lakeridge	$783,088	1,266,927	$0.62	$344,444	38,203	$9.02
Peterborough Civ	$526,512	768,690	$0.68	$277,175	24,041	$11.53
HRSRH	**$1,235,759**	**1,769,132**	**$0.70**	**$560,808**	**37,458**	**$14.97**
Credit Valley	$1,102,755	1,535,703	$0.72	$316,385	25,165	$12.57
William Osler	$1,567,011	2,071,135	$0.76	$565,952	52,352	$10.81
North York Gen	$1,038,375	1,326,063	$0.78	$459,156	37,224	$12.33
Windsor Reg	$1,172,483	1,417,498	$0.83	$637,625	50,943	$12.52
Royal Victoria	$726,101	810,606	$0.90	$298,295	21,320	$13.99
Thunder Bay Reg	$1,490,390	1,487,482	$1.00	$696,877	27,895	$24.98
St. Joseph - Ham	$1,210,455	1,127,639	$1.07	$370,676	36,276	$10.22
	Mean		$0.77			$13.59
	25th Percentile		$0.67			$10.66
	50th Percentile		$0.74			$12.43
	75th Percentile		$0.84			$14.24
	Multi Site 25th Percentile		$0.62			$10.81
	Multi Site 50th Percentile		$0.70			$12.33
	Northern/Sole 25th Percentile		$0.69			$12.89
	Northern/Sole 50th Percentile		$0.76			$14.48

Clinical Chemistry

Exhibit 78: Clinical Chemistry Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Humber River	$2,331,122	3,262,163	$0.71	$826,532	45,372	$18.22
Kingston Gen	$3,037,272	3,728,256	$0.81	$1,198,892	37,408	$32.05
St. Joseph - Ham	$2,108,077	2,479,439	$0.85	$21,416	36,276	$0.59
HRSRH	**$2,011,524**	**2,357,861**	**$0.85**	**$815,859**	**37,458**	**$21.78**
Credit Valley	$2,454,720	2,870,747	$0.86	$489,910	25,165	$19.47
Lakeridge	$1,929,113	2,247,754	$0.86	$717,857	38,203	$18.79
Grand River	$2,256,344	2,116,953	$1.07	$1,022,279	24,320	$42.03
William Osler	$3,083,767	2,888,254	$1.07	$968,049	52,352	$18.49
North York Gen	$2,388,662	2,070,045	$1.15	$622,377	37,224	$16.72
Royal Victoria	$1,100,049	895,386	$1.23	$363,969	21,320	$17.07
Peterborough Civ	$1,183,935	911,806	$1.30	$612,633	24,041	$25.48
Windsor Reg	$2,927,398	1,625,597	$1.80	$2,024,773	50,943	$39.75
Thunder Bay Reg	$1,919,435	1,023,033	$1.88	$718,942	27,895	$25.77
	Mean		$1.11			$22.79
	25th Percentile		$0.85			$18.22
	50th Percentile		$1.07			$19.47
	75th Percentile		$1.23			$25.77
	Multi Site 25th Percentile		$0.85			$18.57
	Multi Site 50th Percentile		$1.07			$23.63
	Northern/Sole 25th Percentile		$0.96			$23.63
	Northern/Sole 50th Percentile		$1.23			$25.77

Haematology

Exhibit 79: Haematology Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Kingston Gen	$1,439,233	2,623,200	$0.55	$795,088	37,4[illegible]	$21.23
Humber River	$965,096	1,605,833	$0.60	$402,362	45,572	$8.88
Lakeridge	$785,088	1,266,327	$0.62	$344,444	38,2[illegible]	$9.02
Peterborough Civ	$520,312	708,090	$0.68	$277,373	24,041	$11.53
HRSRH	**$1,235,759**	**1,709,132**	**$0.7[illegible]**	**$560,608**	**37,450**	**$14.97**
Credit Valley	$1,012,755	1,335,705	$0.72	$316,383	25,163	$12.57
William Osler	$1,567,011	2,071,133	$0.76	$363,352	32,332	$11.02
North York Gen	$1,058,375	1,320,003	$0.78	$433,136	37,224	$12.53
Windsor Reg	$1,172,463	1,417,410	$0.83	$637,625	50,545	$12.52
Royal Victoria	$726,101	809,016	$0.90	$299,293	21,320	$13.99
Thunder Bay Reg	$1,430,300	1,487,482	$1.00	$656,877	27,035	$24.30
St. Joseph's Ham	$1,210,433	1,127,030	$1.07	$570,670	36,270	$10.22
	Mean		$0.77			$15.39
	25th Percentile		$0.67			$10.66
	50th Percentile		$0.74			$12.45
	75th Percentile		$0.84			$14.26
	Multi Site 25th Percentile		$0.62			$10.92
	Multi Site 50th Percentile		$0.71			$12.55
	Northern/Sole 25th Percentile		$0.69			$12.89
	Northern/Sole 50th Percentile		$0.71			$14.49

Anatomical Pathology

Exhibit 80: Anatomical Pathology Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hamilton [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi Site 25th Percentile		[illegible]			[illegible]
	Multi Site 50th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]

Microbiology

Exhibit 81: Microbiology Functional Centre Benchmarking - Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Share Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hamilton Reco	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St Joseph - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Co	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible] Grp. 25th Percentile		[illegible]			[illegible]
	[illegible] Grp. 75th Percentile		[illegible]			[illegible]
	Northern Grp. 25th Percentile		[illegible]			[illegible]
	Northern Grp. 75th Percentile		[illegible]			[illegible]

Anatomical Pathology

Exhibit [illegible]: Anatomical Pathology Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case ([illegible])

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Microbiology

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	[illegible]		[illegible]			[illegible]
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	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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	[illegible]		[illegible]			[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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			[illegible]		[illegible]
			[illegible]		[illegible]

Blood Bank

Exhibit 82: Blood Bank Functional Centre Benchmarking - Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility/Corporation	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expense / Workload Unit	2000/2001 Functional Centre Total Net Expenses	2000/2001 Weighted Cases	Expense / Weighted Case
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Other Clinical Lab

Exhibit 83: Other Clinical Lab Functional Centre Benchmarking - Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility/Corporation	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expense / Workload Unit	2000/2001 Functional Centre Total Net Expenses	2000/2001 Weighted Cases	Expense / Weighted Case
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Diagnostic Imaging

Exhibit [illegible]: Diagnostic Imaging Labour Productivity - Workload Units per UPP Minute (2000/01)

Multi-Site	Northern / Not-Northern	[illegible]	2000/2001 Total Workload Units	2000/2001 Total UPP Worked and Purchased Hours *60	Total Workload Units / (Total UPP Hours *60)
[illegible]	[illegible]	Kingston Gen	4,740,390	4,914,240	[illegible]
[illegible]	[illegible]	Thunder Bay Reg	5,906,299	6,072,960	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**6,036,059**	**6,095,440**	**[illegible]**
[illegible]	[illegible]	Rouge Valley	5,915,440	6,007,380	[illegible]
[illegible]	[illegible]	Peterborough Civ	4,737,017	5,776,060	[illegible]
[illegible]	[illegible]	Credit Valley	4,742,503	5,167,544	[illegible]
[illegible]	[illegible]	North York Gen	4,554,935	4,740,960	[illegible]
[illegible]	[illegible]	Humber River	7,266,227	7,303,560	[illegible]
[illegible]	[illegible]	St. Joseph's - Ham	5,404,229	5,275,060	[illegible]
[illegible]	[illegible]	Lakeridge	4,497,370	4,370,340	[illegible]
[illegible]	[illegible]	Trillium	10,074,205	9,955,080	[illegible]
[illegible]	[illegible]	Grand River	5,456,150	5,275,560	[illegible]
[illegible]	[illegible]	Sault Area Hosps	4,176,275	3,695,420	[illegible]
[illegible]	[illegible]	North Bay Gen	3,512,766	2,799,080	[illegible]
[illegible]	[illegible]	Royal Victoria	8,251,798	5,962,296	[illegible]
[illegible]	[illegible]	William Osler	14,395,175	9,995,400	[illegible]
[illegible]	[illegible]	Windsor Reg	19,152,165	11,646,720	[illegible]
			Mean		[illegible]
			25th Percentile		[illegible]
			50th Percentile		[illegible]
			75th Percentile		[illegible]
			Multi-Site 25th Percentile		[illegible]
			Multi-Site 50th Percentile		[illegible]
			Northern Only 25th Percentile		[illegible]
			Northern Only 50th Percentile		[illegible]

Exhibit 85: Diagnostic Imaging (Combined) Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$1,574,159	6,938,008	$0.23	$0.10	$0.16	$0.24
UPP Compensation	$5,657,588	6,938,008	$0.82	$0.55	$0.63	$0.82
Medical Compensation	$4,173,402	6,938,008	$0.60	$0.53	$0.64	$0.74
Total Compensation	$11,405,149	6,938,008	$1.64	$1.23	$1.36	$1.81
Supplies	$3,656,662	6,938,008	$0.53	$0.20	$0.27	$0.38
Sundry	$120,535	6,938,008	$0.02	$0.01	$0.01	$0.02
Equipment	$732,192	6,938,008	$0.11	$0.11	$0.14	$0.17
Referred Out	$129,824	6,938,008	$0.02	$0.00	$0.01	$0.02
Total	$16,044,362	6,938,008	$2.31	$1.63	$1.81	$2.31

General X-Ray

Exhibit 86: General X-Ray Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Windsor Reg	$8,499,022	12,820,912	$0.66	$3,217,307	49,405	$65.13
William Osler	$3,297,467	3,655,855	$0.90	$1,875,360	52,552	$35.78
Sault Area Hosps	$1,873,645	1,715,212	$1.09	$539,617	17,028	$31.35
Lakeridge	$5,869,899	5,314,171	$1.10	$966,310	58,215	$17.44
St. Joseph - Ham	$3,589,925	3,113,040	$1.15	$1,488,715	36,276	$41.04
Royal Victoria	$2,816,291	2,145,418	$1.31	$782,705	21,320	$36.71
Trillium	$6,733,071	5,064,934	$1.33	$1,632,060	41,158	$39.67
Grand River	$3,407,322	2,502,025	$1.36	$990,625	24,320	$40.73
Peterborough Co	$3,245,942	2,361,072	$1.37	$939,191	24,041	$39.06
Humber River	$4,392,323	2,982,244	$1.47	$1,686,500	45,372	$37.17
North Bay Gen	$2,530,666	1,718,322	$1.49	$681,894	14,353	$47.51
Rouge Valley	$4,068,551	2,520,209	$1.61	$948,246	36,006	$26.34
Kingston Gen	$5,226,715	3,147,080	$1.66	$2,036,035	37,408	$54.43
North York Gen	$6,050,134	3,072,572	$1.97	$1,454,877	37,224	$39.08
HRSRH	**$5,258,319**	**2,662,180**	**$1.98**	**$1,977,640**	**37,458**	**$52.80**
Credit Valley	$2,961,882	1,157,325	$2.56	$592,782	23,165	$25.59
Thunder Bay Reg	$3,850,065	1,212,033	$3.17	$1,022,738	27,895	$36.66
	Mean		$1.53			$38.99
	25th Percentile		$1.13			$35.78
	50th Percentile		$1.37			$38.53
	75th Percentile		$1.66			$41.04
	Multi Site 25th Percentile		$1.29			$36.00
	Multi Site 50th Percentile		$1.42			$39.11
	Northern/Sole 25th Percentile		$1.31			$36.71
	Northern/Sole 50th Percentile		$1.37			$40.73

Exhibit 87: General X-Ray Labour Productivity – Workload Units per UPP Minute (2000/01)

Multi Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Thunder Bay Reg	1,212,955	3,245,640	0.37
No	No	Credit Valley	1,157,325	3,036,240	0.38
Yes	Yes	Kingston Gen	1,947,050	3,943,620	0.49
Yes	No	North York Gen	3,072,572	4,665,180	0.66
Yes	**Yes**	**HRSRH**	**2,662,180**	**3,831,720**	**0.69**
Yes	No	Rouge Valley	2,520,269	3,179,280	0.79
Yes	No	Humber River	2,982,244	3,636,960	0.82
Yes	Yes	Peterborough Civ	2,361,072	2,781,900	0.85
Yes	Yes	Sault Area Hosps	1,701,212	1,890,060	0.90
Yes	No	Trillium	5,064,934	5,334,840	0.95
Yes	No	Lakeridge	3,314,171	3,268,320	1.01
No	No	St. Joseph - Ham	3,115,040	2,854,980	1.09
Yes	Yes	North Bay Gen	1,718,522	1,566,000	1.10
Yes	Yes	Grand River	2,502,025	1,983,660	1.26
Yes	No	William Osler	5,653,855	4,393,380	1.29
No	Yes	Royal Victoria	2,143,418	1,643,220	1.30
Yes	Yes	Windsor Reg	12,829,912	5,987,940	2.14
			Mean		0.95
			25th Percentile		0.69
			50th Percentile		0.90
			75th Percentile		1.10
			Multi Site 25th Percentile		0.72
			Multi Site 50th Percentile		0.87
			Northern/Sole 25th Percentile		0.69
			Northern/Sole 50th Percentile		0.90

Exhibit 88: General X-Ray Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$1,247,479	2,662,180	$0.47	$0.01	$0.09	$0.22
UPP Compensation	$2,406,944	2,662,180	$0.90	$0.53	$0.62	$0.86
Medical Compensation	$809,268	2,662,180	$0.30	$0.28	$0.30	$0.38
Total Compensation	$4,463,691	2,662,180	$1.68	$0.89	$1.01	$1.42
Supplies	$541,021	2,662,180	$0.20	$0.18	$0.22	$0.27
Sundry	$120,519	2,662,180	$0.05	$0.01	$0.01	$0.02
Equipment	$215,405	2,662,180	$0.08	$0.08	$0.11	$0.14
Referred Out	$97,801	2,662,180	$0.04	$0.00	$0.00	$0.02
Total	$5,438,437	2,662,180	$2.04	$1.16	$1.40	$1.65

Exhibit 85: Diagnostic Imaging (Combined) Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$1,574,159	6,938,008	$0.23	$0.10	$0.16	$0.24
UPP Compensation	$5,657,588	6,938,008	$0.82	$0.55	$0.63	$0.82
Medical Compensation	$4,173,402	6,938,008	$0.60	$0.53	$0.64	$0.74
Total Compensation	$11,405,149	6,938,008	$1.64	$1.23	$1.36	$1.81
Supplies	$3,656,662	6,938,008	$0.53	$0.20	$0.27	$0.38
Sundry	$120,535	6,938,008	$0.02	$0.01	$0.01	$0.02
Equipment	$732,192	6,938,008	$0.11	$0.11	$0.14	$0.17
Referred Out	$129,824	6,938,008	$0.02	$0.00	$0.01	$0.02
Total	$16,044,362	6,938,008	$2.31	$1.63	$1.81	$2.31

General X-Ray

Exhibit 86: General X-Ray Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Windsor Reg	$8,499,622	12,829,912	$0.66	$3,217,307	50,943	$63.15
William Osler	$5,287,461	5,653,855	$0.94	$1,873,360	52,352	$35.78
Sault Area Hosps	$1,873,645	1,701,212	$1.10	$558,617	17,828	$31.33
Lakeridge	$3,809,599	3,314,171	$1.15	$666,310	38,203	$17.44
St. Joseph - Ham	$3,589,925	3,115,040	$1.15	$1,488,715	36,276	$41.04
Royal Victoria	$2,816,291	2,143,418	$1.31	$782,705	21,320	$36.71
Trillium	$6,753,071	5,064,934	$1.33	$1,632,060	41,138	$39.67
Grand River	$3,407,522	2,502,025	$1.36	$990,625	24,320	$40.73
Peterborough Cv	$3,245,942	2,361,072	$1.37	$959,191	24,041	$39.90
Humber River	$4,392,323	2,982,244	$1.47	$1,686,390	45,372	$37.17
North Bay Gen	$2,556,666	1,718,522	$1.49	$681,894	14,353	$47.51
Rouge Valley	$4,068,531	2,520,269	$1.61	$948,246	36,006	$26.34
Kingston Gen	$3,226,713	1,947,050	$1.66	$2,036,935	37,408	$54.45
North York Gen	$6,030,154	3,072,572	$1.96	$1,434,877	37,224	$38.55
HRSRH	**$5,258,319**	**2,662,180**	**$1.98**	**$1,977,640**	**37,458**	**$52.80**
Credit Valley	$2,961,582	1,157,325	$2.56	$592,782	25,165	$23.56
Thunder Bay Reg	$3,850,003	1,212,955	$3.17	$1,022,708	27,895	$36.66
	Mean		$1.55			$38.99
	25th Percentile		$1.15			$35.78
	50th Percentile		$1.37			$38.55
	75th Percentile		$1.66			$41.04
	Multi Site 25th Percentile		$1.20			$36.00
	Multi Site 50th Percentile		$1.42			$39.11
	Northern/Sole 25th Percentile		$1.31			$36.71
	Northern/Sole 50th Percentile		$1.37			$40.73

Appendix XI: Detailed Financial Benchmarking Results

Exhibit 87: General X-Ray Labour Productivity – Workload Units per UPP Minute (2000/01)

Multi-Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Thunder Bay Reg	1,212,955	3,245,640	0.37
No	No	Credit Valley	1,157,325	3,036,240	0.38
Yes	Yes	Kingston Gen	1,947,050	3,943,620	0.49
Yes	No	North York Gen	3,072,572	4,665,180	0.66
Yes	**Yes**	**HRSRH**	**2,662,180**	**3,831,720**	**0.69**
Yes	No	Rouge Valley	2,520,269	3,179,280	0.79
Yes	No	Humber River	2,982,244	3,636,960	0.82
Yes	Yes	Peterborough Civ	2,361,072	2,781,900	0.85
Yes	Yes	Sault Area Hosps	1,701,212	1,890,060	0.90
Yes	No	Trillium	5,064,934	5,334,840	0.95
Yes	No	Lakeridge	3,314,171	3,268,320	1.01
No	No	St. Joseph - Ham	3,115,040	2,854,980	1.09
Yes	Yes	North Bay Gen	1,718,522	1,566,000	1.10
Yes	Yes	Grand River	2,502,025	1,983,660	1.26
Yes	No	William Osler	5,653,855	4,393,380	1.29
No	Yes	Royal Victoria	2,143,418	1,643,220	1.30
Yes	Yes	Windsor Reg	12,829,912	5,987,940	2.14
			Mean		0.95
			25th Percentile		0.69
			50th Percentile		0.90
			75th Percentile		1.10
			Multi Site 25th Percentile		0.72
			Multi Site 50th Percentile		0.87
			Northern/Sole 25th Percentile		0.69
			Northern/Sole 50th Percentile		0.90

Exhibit 88: General X-Ray Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$1,247,479	2,662,180	$0.47	$0.01	$0.09	$0.22
UPP Compensation	$2,406,944	2,662,180	$0.90	$0.53	$0.62	$0.86
Medical Compensation	$809,268	2,662,180	$0.30	$0.28	$0.30	$0.38
Total Compensation	$4,463,691	2,662,180	$1.68	$0.89	$1.01	$1.42
Supplies	$541,021	2,662,180	$0.20	$0.18	$0.22	$0.27
Sundry	$120,519	2,662,180	$0.05	$0.01	$0.01	$0.02
Equipment	$215,405	2,662,180	$0.08	$0.08	$0.11	$0.14
Referred Out	$97,801	2,662,180	$0.04	$0.00	$0.00	$0.02
Total	$5,438,437	2,662,180	$2.04	$1.16	$1.40	$1.65

Diagnostic Ultrasound

Exhibit 89: Diagnostic Ultrasound Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Sault Area Hosps	$599,627	707,717	$0.85	$175,953	17,828	$9.87
Windsor Reg	$2,039,611	1,963,551	$1.04	$640,130	50,943	$12.57
Royal Victoria	$884,673	846,419	$1.05	$154,183	21,320	$7.23
HRSRH	**$1,271,506**	**1,142,246**	**$1.11**	**$373,027**	**37,458**	**$9.96**
William Osler	$3,313,935	2,812,228	$1.18	$527,999	52,352	$10.09
Thunder Bay Reg	$1,405,254	1,175,086	$1.20	$499,200	27,895	$17.90
Trillium	$1,779,975	1,455,845	$1.22	$292,285	41,138	$7.11
Peterborough Civ	$761,849	616,837	$1.24	$129,074	24,041	$5.37
Humber River	$1,767,358	1,425,285	$1.24	$536,700	45,372	$11.83
North Bay Gen	$784,412	611,320	$1.28	$139,047	14,353	$9.69
Lakeridge	$2,210,641	1,675,185	$1.32	$285,143	38,203	$7.46
St. Joseph - Ham	$1,185,359	862,342	$1.37	$298,585	36,276	$8.23
North York Gen	$2,669,016	1,930,881	$1.38	$405,908	37,224	$10.90
Grand River	$742,029	520,366	$1.43	$143,628	24,320	$5.91
Credit Valley	$1,347,239	837,232	$1.61	$155,784	25,165	$6.19
Rouge Valley	$1,639,294	985,686	$1.66	$294,727	36,006	$8.19
Kingston Gen	$877,906	476,062	$1.84	$379,652	37,408	$10.15
	Mean		$1.30			$9.33
	25th Percentile		$1.18			$7.23
	50th Percentile		$1.24			$9.69
	75th Percentile		$1.38			$10.15
	Multi Site 25th Percentile		$1.18			$7.64
	Multi Site 50th Percentile		$1.24			$9.91
	Northern/Sole 25th Percentile		$1.05			$7.23
	Northern/Sole 50th Percentile		$1.20			$9.87

Computed Tomography

Exhibit 90: Computed Tomography Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Windsor Reg	$2,390,605	1,399,293	$1.71	$829,384	50,945	$16.28
William Osler	$3,119,914	1,620,658	$1.93	$666,851	52,352	$12.74
Peterborough Ctr	$2,363,669	1,225,011	$1.93	$428,812	24,041	$17.84
Trillium	$2,338,018	1,114,342	$2.10	$342,311	41,138	$8.32
North York Gen	$3,089,905	1,413,343	$2.19	$541,819	37,224	$14.56
Royal Victoria	$2,352,973	960,608	$2.45	$464,689	21,330	$21.79
Sault Area Hosps	$960,290	390,915	$2.46	$242,833	17,820	$13.62
North Bay Gen	$914,143	333,165	$2.74	$175,070	14,333	$12.21
Humber River	$2,648,433	961,711	$2.75	$677,140	45,372	$14.92
St. Joseph - Ham	$1,183,235	421,182	$2.81	$213,610	36,276	$5.89
Lakeridge	$1,611,576	562,368	$2.87	$286,898	38,203	$7.51
Credit Valley	$1,533,364	493,007	$3.11	$252,815	25,163	$10.05
HRSRH	**$2,129,927**	**648,114**	**$3.29**	**$566,303**	**37,454**	**$15.12**
Kingston Gen	$1,577,440	474,235	$3.33	$675,828	37,400	$18.07
Rouge Valley	$2,185,317	592,374	$3.69	$474,557	36,006	$13.18
Grand River	$1,194,572	297,442	$4.02	$262,463	24,330	$10.79
Thunder Bay Reg	$1,219,137	300,280	$4.06	$233,054	27,895	$8.35
	Mean		$2.79			$13.01
	25th Percentile		$2.19			$10.05
	50th Percentile		$2.75			$13.18
	75th Percentile		$3.29			$15.12
	Multi Site 25th Percentile		$2.13			$11.14
	Multi Site 50th Percentile		$2.74			$13.40
	Northern/Sole 25th Percentile		$2.49			$12.21
	Northern/Sole 50th Percentile		$2.75			$13.12

Diagnostic Ultrasound

Exhibit 89: Diagnostic Ultrasound Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expense	2000/2001 Workload Units	Net Functional Centre Expense / Workload Unit	2000/2001 Functional Centre Acute Net Expense	2000/2001 Weighted Cases	Expense / Weighted Case
Sault Area Hosps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	Northern/Sole 25th Percentile		[illegible]			[illegible]
	Northern/Sole 50th Percentile		[illegible]			[illegible]

Computed Tomography

Exhibit 90: Computed Tomography Functional Centre Benchmarking - Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expense / Workload Unit	2000/2001 Functional Centre Base Net Expenses	2000/2001 Weighted Cases	Expense / Weighted Case
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Scarborough Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-site 25th Percentile		[illegible]			[illegible]
	Multi-site 50th Percentile		[illegible]			[illegible]
	Northern Sole 25th Percentile		[illegible]			[illegible]
	Northern Sole 50th Percentile		[illegible]			[illegible]

Appendix XI: Detailed Financial Benchmarking Results

Exhibit [illegible]: Computed Tomography Labour Productivity - Workload Units per UPP Minute (2000/01)

Multi-Site	Academic / Not Peer [illegible]	Facility Description	2000/2001 Total Workload Units	2000/2001 Total UPP Worked and Purchased Hours [illegible]	Total Workload Units / Total UPP Hours [illegible]
Yes	Yes	Grand River	[illegible]	[illegible]	[illegible]
No	No	Credit Valley	[illegible]	[illegible]	[illegible]
Yes	Yes	HRSRH	[illegible]	[illegible]	[illegible]
Yes	Yes	Kingston Gen	[illegible]	[illegible]	[illegible]
Yes	Yes	Sault Area Hosp	[illegible]	[illegible]	[illegible]
Yes	No	Rouge Valley	[illegible]	[illegible]	[illegible]
Yes	Yes	Thunder Bay Reg	[illegible]	[illegible]	[illegible]
Yes	No	Lakeridge	[illegible]	[illegible]	[illegible]
No	No	St. Joseph's - Ham	[illegible]	[illegible]	[illegible]
Yes	No	Humber River	[illegible]	[illegible]	[illegible]
Yes	Yes	North Bay Gen	[illegible]	[illegible]	[illegible]
No	Yes	Royal Victoria	[illegible]	[illegible]	[illegible]
Yes	No	Trillium	[illegible]	[illegible]	[illegible]
Yes	No	North York Gen	[illegible]	[illegible]	[illegible]
Yes	Yes	Windsor Reg	[illegible]	[illegible]	[illegible]
Yes	Yes	Peterborough Co	[illegible]	[illegible]	[illegible]
Yes	No	William Osler	[illegible]	[illegible]	[illegible]
			Mean		[illegible]
			25th Percentile		[illegible]
			50th Percentile		[illegible]
			75th Percentile		[illegible]
			Multi-Site 25th Percentile		[illegible]
			Multi-Site 50th Percentile		[illegible]
			[illegible] 25th Percentile		[illegible]
			[illegible] 50th Percentile		[illegible]

Exhibit [illegible]: Computed Tomography Benchmarking by Cost Category (2000/01)

Expense Type	HRSRH Expenses	HRSRH Workload Units	HRSRH Cost per Workload Unit	25th Percentile	Median	75th Percentile
MOS Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Medical Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Magnetic Resonance Imaging

[illegible] Magnetic Resonance Imaging [illegible] – [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Appendix [illegible]: [illegible] Financial Benchmarking Results

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]

[illegible]

Expense Type	[illegible]	[illegible]	[illegible]	[illegible]	Median	[illegible]
[illegible] Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Magnetic Resonance Imaging

[illegible]

Appendix XI: Detailed Financial Benchmarking Results

Exhibit [illegible]: Magnetic Resonance Imaging Labour Productivity – Workload Units per UPP Hours (2000/01)

Multi-Site	Teaching / [illegible]	[illegible]	2000/2001 Total Workload Units	2000/2001 Total UPP Worked and Purchased Hours * 60	Total Workload Units/(Total UPP Hours * 60)
Yes	No	North York Gen	[illegible]	[illegible]	[illegible]
Yes	Yes	Kingston Gen	[illegible]	[illegible]	[illegible]
Yes	No	Trillium	[illegible]	[illegible]	[illegible]
Yes	Yes	Windsor Reg	[illegible]	[illegible]	[illegible]
Yes	Yes	Thunder Bay Reg	[illegible]	[illegible]	[illegible]
No	No	[illegible]	[illegible]	[illegible]	[illegible]
Yes	No	Lakeridge	[illegible]	[illegible]	[illegible]
Yes	Yes	Royal Victoria	[illegible]	[illegible]	[illegible]
Yes	Yes	Sault Area Hosp	[illegible]	[illegible]	[illegible]
Yes	No	Humber River	[illegible]	[illegible]	[illegible]
Yes	No	William Osler	[illegible]	[illegible]	[illegible]
			Mean		[illegible]
			25th Percentile		[illegible]
			50th Percentile		[illegible]
			75th Percentile		[illegible]
			Multi-Site 25th Percentile		[illegible]
			Multi-Site 50th Percentile		[illegible]
			[illegible] 25th Percentile		[illegible]
			[illegible] 50th Percentile		[illegible]

Exhibit [illegible]: Magnetic Resonance Imaging Benchmarking by Cost Category (2000/01)

Expense Type	[illegible] Expenses	[illegible] Workload Units	[illegible] Cost per Workload Unit	25th Percentile	Median	75th Percentile
MOS Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Medical Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Nuclear Medicine

Exhibit 96: Nuclear Medicine Functional Centre Benchmarking - Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility/Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Sault Area Hospital	[illegible]	[illegible]	$1.24	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	$1.27	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	$1.34	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	$1.49	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	$1.82	[illegible]	[illegible]	[illegible]
Peterborough Co	[illegible]	[illegible]	$1.92	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	$1.98	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		$1.49			[illegible]
	Multi-Site 50th Percentile		$1.82			[illegible]
	Northern Vols 25th Percentile		$1.49			[illegible]
	Northern Vols 50th Percentile		[illegible]			[illegible]

Exhibit 94: Magnetic Resonance Imaging Labour Productivity – Workload Units per UPP Minute (2000/01)

Multi Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units / (Total UPP Hours * 60)*
Yes	No	North York Gen	183,733	313,860	0.59
Yes	Yes	Kingston Gen	421,781	687,720	0.61
Yes	No	Trillium	456,504	514,740	0.89
Yes	Yes	Windsor Reg	409,645	444,060	0.92
Yes	Yes	Thunder Bay Reg	373,866	368,520	1.01
Yes	**Yes**	**HRSRH**	**420,613**	**389,400**	**1.08**
Yes	No	Lakeridge	410,516	318,660	1.29
No	Yes	Royal Victoria	535,170	374,820	1.43
Yes	Yes	Sault Area Hosps	400,419	235,260	1.70
Yes	No	Humber River	520,417	295,860	1.76
Yes	No	William Osler	763,727	293,220	2.60
			Mean		1.26
			25th Percentile		0.90
			50th Percentile		1.08
			75th Percentile		1.57
			Multi Site 25th Percentile		0.90
			Multi Site 50th Percentile		1.05
			Northern/Sole 25th Percentile		0.95
			Northern/Sole 50th Percentile		1.05

Exhibit 95: Magnetic Resonance Imaging Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$49,274	420,613	$0.12	$0.01	$0.18	$0.27
UPP Compensation	$263,362	420,613	$0.63	$0.33	$0.55	$0.71
Medical Compensation	$665,024	420,613	$1.58	$1.02	$1.31	$1.58
Total Compensation	$977,660	420,613	$2.32	$1.35	$1.86	$2.85
Supplies	$111,207	420,613	$0.26	$0.18	$0.26	$0.32
Sundry	$15	420,613	$0.00	$0.00	$0.00	$0.01
Equipment	$178,366	420,613	$0.42	$0.18	$0.34	$0.42
Total	$1,267,248	420,613	$3.01	$1.29	$2.19	$3.89

Nuclear Medicine

Exhibit 96: Nuclear Medicine Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Sault Area Hosps	$862,636	698,285	$1.24	$65,6001	7,828	$3.68
William Osler	$3,862,976	3,039,851	$1.27	$415,706	52,352	$7.94
North Bay Gen	$665,969	496,684	$1.34	$37,7531	4,353	$2.63
Kingston Gen	$997,850	671,932	$1.49	$116,257	37,408	$3.11
HRSRH	**$1,685,783**	**1,025,222**	**$1.64**	**$304,551**	**37,458**	**$8.13**
North York Gen	$2,614,423	1,571,347	$1.66	$166,117	37,224	$4.46
Thunder Bay Reg	$1,599,986	879,181	$1.82	$151,904	27,895	$5.45
Peterborough Cc	$582,354	319,532	$1.82	$94,8642	4,041	$3.95
St. Joseph - Ham	$1,806,092	912,312	$1.98	$174,251	36,276	$4.80
Lakeridge	$2,692,864	1,337,817	$2.01	$431,618	38,203	$11.30
Windsor Reg	$4,608,844	2,210,301	$2.09	$782,079	50,943	$15.35
Humber River	$2,466,464	1,181,193	$2.09	$190,306	45,372	$4.19
Royal Victoria	$994,872	466,406	$2.13	$60,1102	1,520	$2.82
Credit Valley	$559,886	208,171	$2.69	$93,5162	5,165	$3.72
Rouge Valley	$2,437,619	835,142	$2.92	$210,595	36,066	$5.84
Trillium	$3,093,899	893,732	$3.46	$571,548	41,138	$13.89
	Mean		$1.98			$6.33
	25th Percentile		$1.60			$3.71
	50th Percentile		$1.90			$4.63
	75th Percentile		$2.10			$7.99
	Multi Site 25th Percentile		$1.49			$3.95
	Multi Site 50th Percentile		$1.82			$5.45
	Northern/Sole 25th Percentile		$1.45			$3.04
	Northern/Sole 50th Percentile		$1.73			$3.81

Exhibit 97: Nuclear Medicine Labour Productivity – Workload Units per UPP Minute

Multi-Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Peterborough Civ	319,532	594,060	0.54
Yes	Yes	Windsor Reg	2,210,301	2,830,380	0.78
Yes	No	Rouge Valley	835,142	1,043,100	0.80
Yes	No	Trillium	893,732	1,092,060	0.82
No	No	Credit Valley	208,171	234,480	0.89
Yes	No	Lakeridge	1,337,817	1,453,920	0.92
Yes	**Yes**	**HRSRH**	**1,025,222**	**1,073,520**	**0.96**
Yes	Yes	Kingston Gen	671,932	695,040	0.97
No	Yes	Royal Victoria	466,406	470,880	0.99
Yes	Yes	Thunder Bay Reg	879,181	871,080	1.01
Yes	No	Humber River	1,181,193	1,062,420	1.11
No	No	St. Joseph - Ham	912,312	776,700	1.17
Yes	No	North York Gen	1,571,347	1,230,300	1.28
Yes	Yes	North Bay Gen	496,684	308,820	1.61
Yes	No	William Osler	3,039,851	1,791,960	1.70
Yes	Yes	Sault Area Hosps	698,285	322,860	2.16
			Mean		1.11
			25th Percentile		0.87
			50th Percentile		0.98
			75th Percentile		1.20
			Multi Site 25th Percentile		0.82
			Multi Site 50th Percentile		0.97
			Northern/Sole 25th Percentile		0.91
			Northern/Sole 50th Percentile		0.98

Non-Invasive Cardiology

Exhibit 98: Non-Invasive Cardiology Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Lakeridge	$1,456,915	1,803,922	$0.81	$552,254	38,203	$14.46
Sault Area Hosps	$637,283	690,460	$0.92	$158,078	17,828	$8.87
Peterborough Civ	$557,872	568,365	$0.98	$278,755	24,041	$11.59
Kingston Gen	$758,683	765,825	$0.99	$485,741	37,408	$12.98
North York Gen	$1,824,642	1,825,460	$1.00	$551,012	37,224	$14.80
North Bay Gen	$858,085	753,492	$1.14	$326,132	14,353	$22.72
St. Joseph - Ham	$1,158,638	1,016,671	$1.14	$427,943	36,276	$11.80
Humber River	$2,204,776	1,848,911	$1.19	$654,921	45,372	$14.43
Grand River	$366,868	259,138	$1.42	$85,0032	4,320	$3.50
Credit Valley	$2,421,456	1,617,006	$1.50	$401,563	25,165	$15.96
William Osler	$2,644,454	1,641,741	$1.61	$865,502	52,352	$16.53
HRSRH	**$1,652,537**	**996,528**	**$1.66**	**$686,616**	**37,458**	**$18.33**
Trillium	$2,054,718	1,227,720	$1.67	$439,727	41,138	$10.69
Windsor Reg	$3,301,660	1,810,005	$1.82	$1,328,595	50,943	$26.08
Royal Victoria	$1,086,625	581,471	$1.87	$163,462	21,320	$7.67
Rouge Valley	$2,723,651	1,430,954	$1.90	$641,884	36,006	$17.83
Thunder Bay Reg	$1,548,796	770,307	$2.01	$341,043	27,895	$12.23
	Mean		$1.39			$14.14
	25th Percentile		$1.00			$11.59
	50th Percentile		$1.42			$14.43
	75th Percentile		$1.67			$16.53
	Multi Site 25th Percentile		$0.99			$11.75
	Multi Site 50th Percentile		$1.30			$14.45
	Northern/Sole 25th Percentile		$0.99			$8.87
	Northern/Sole 50th Percentile		$1.42			$12.23

Exhibit 97: Nuclear Medicine Labour Productivity – Workload Units per UPP Minute

Multi-Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Peterborough Civ	319,532	594,060	0.54
Yes	Yes	Windsor Reg	2,210,301	2,830,380	0.78
Yes	No	Rouge Valley	835,142	1,043,100	0.80
Yes	No	Trillium	893,732	1,092,060	0.82
No	No	Credit Valley	208,171	234,480	0.89
Yes	No	Lakeridge	1,337,817	1,453,920	0.92
Yes	**Yes**	**HRSRH**	**1,025,222**	**1,073,520**	**0.96**
Yes	Yes	Kingston Gen	671,932	695,040	0.97
No	Yes	Royal Victoria	466,406	470,880	0.99
Yes	Yes	Thunder Bay Reg	879,181	871,080	1.01
Yes	No	Humber River	1,181,193	1,062,420	1.11
No	No	St. Joseph - Ham	912,312	776,700	1.17
Yes	No	North York Gen	1,571,347	1,230,300	1.28
Yes	Yes	North Bay Gen	496,684	308,820	1.61
Yes	No	William Osler	3,039,851	1,791,960	1.70
Yes	Yes	Sault Area Hosps	698,285	322,860	2.16
			Mean		1.11
			25th Percentile		0.87
			50th Percentile		0.98
			75th Percentile		1.20
			Multi Site 25th Percentile		0.82
			Multi Site 50th Percentile		0.97
			Northern/Sole 25th Percentile		0.91
			Northern/Sole 50th Percentile		0.98

Non-Invasive Cardiology

Exhibit 98: Non-Invasive Cardiology Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Lakeridge	$1,456,915	1,805,922	$0.81	$552,254	38,205	$14.46
Sault Area Hosps	$637,283	690,460	$0.92	$158,076	17,828	$8.87
Peterborough Civ	$557,872	568,363	$0.98	$278,755	24,041	$11.59
Kingston Gen	$758,083	763,825	$0.99	$485,741	37,408	$12.98
North York Gen	$1,824,642	1,825,469	$1.00	$551,012	37,224	$14.80
North Bay Gen	$838,085	735,492	$1.14	$326,152	14,355	$22.72
St. Joseph - Ham	$1,158,638	1,016,671	$1.14	$427,945	36,276	$11.80
Humber River	$2,204,776	1,848,911	$1.19	$654,521	45,372	$14.43
Grand River	$366,868	259,138	$1.42	$25,052	4,520	$5.54
Credit Valley	$2,421,456	1,617,000	$1.50	$401,363	25,165	$15.95
William Osler	$2,644,454	1,641,741	$1.61	$865,362	52,932	$16.35
HRSRH	**$1,652,537**	**996,528**	**$1.66**	**$686,616**	**37,456**	**$18.33**
Trillium	$2,054,718	1,227,720	$1.67	$415,727	41,156	$10.10
Windsor Reg	$3,301,660	1,810,005	$1.82	$1,326,305	50,945	$26.03
Royal Victoria	$1,086,625	581,471	$1.87	$165,462	21,520	$7.67
Rouge Valley	$2,725,651	1,430,934	$1.90	$641,884	36,006	$17.83
Thunder Bay Reg	$1,548,756	770,567	$2.01	$341,043	27,805	$12.27
	Mean		$1.30			$14.14
	25th Percentile		$1.00			$11.59
	50th Percentile		$1.42			$14.45
	75th Percentile		$1.67			$16.35
	Multi Site 25th Percentile		$0.99			$11.73
	Multi Site 50th Percentile		$1.30			$14.45
	Northern/Sole 25th Percentile		$0.99			$8.87
	Northern/Sole 50th Percentile		$1.42			$12.25

Exhibit 99: Non-Invasive Cardiology Labour Productivity – Workload Units per UPP Minute (2000/01)

Multi Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Total Workload Units*	*2000/2001 Total UPP Worked and Purchased Hours * 60*	*Total Workload Units/(Total UPP Hours * 60)*
Yes	Yes	Kingston Gen	765,825	1,305,000	0.59
Yes	No	William Osler	1,640,700	1,790,520	0.92
Yes	No	Trillium	1,227,720	1,266,540	0.97
Yes	Yes	Thunder Bay Reg	776,367	780,300	0.99
Yes	No	Rouge Valley	1,650,554	1,601,520	1.03
Yes	Yes	Windsor Reg	1,010,005	1,005,840	1.07
Yes	Yes	Sault Area Hosps	690,860	624,120	1.11
No	Yes	Royal Victoria	591,671	525,420	1.13
Yes	Yes	North Bay Gen	753,892	645,080	1.16
Yes	Yes	Grand River	250,156	215,580	1.20
Yes	Yes	HRSRH	996,520	779,000	1.28
Yes	No	Humber River	1,840,551	1,371,480	1.35
No	No	Credit Valley	1,617,986	1,195,020	1.35
Yes	Yes	Peterborough Cv	508,503	356,700	1.43
Yes	No	North York Gen	1,825,860	1,266,040	1.47
No	No	St. Joseph - Ham	1,010,671	677,760	1.50
No	No	Lakeridge	1,865,922	875,520	2.13
			Mean		1.22
			25th Percentile		1.03
			50th Percentile		1.16
			75th Percentile		1.35
			Multi Site 25th Percentile		0.99
			Multi Site 50th Percentile		1.13
			Northern/Sole 25th Percentile		1.07
			Northern/Sole 50th Percentile		1.18

Exhibit 100: Non-Invasive Cardiology Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$119,351	996,520	$0.12	$0.02	$0.08	$0.15
UPP Compensation	$457,607	996,520	$0.46	$0.40	$0.46	$0.55
Medical Compensation	$967,289	996,520	$0.97	$0.54	$0.73	$0.91
Total Compensation	$1,544,247	996,520	$1.55	$0.96	$1.32	$1.50
Supplies	$49,167	996,520	$0.05	$0.04	$0.05	$0.06
Sundry	$13,490	996,520	$0.01	$0.00	$0.00	$0.01
Equipment	$4,228	996,520	$0.00	$0.01	$0.01	$0.05
Total	$1,611,132	996,520	$1.62	$1.00	$1.42	$1.67

Electrodiagnosis

Exhibit [illegible]: Electrodiagnosis Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Total Net Expenses*	*2000/2001 Weighted Cases*	*Expenses / Weighted Case*
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hamilton Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]
	Southern Ont. 25th Percentile		[illegible]			[illegible]
	Southern Ont. 50th Percentile		[illegible]			[illegible]

Appendix XI: Detailed Financial Benchmarking Results

Exhibit 99: Non-Invasive Cardiology Labour Productivity – Workload Units per UPP [illegible] (2000/01)

Multi-Site	Teaching / Non-Teaching	Facility/Location	2000/2001 Total Workload Units	2000/2001 Total UPP Worked and Purchased Hours (2)	Total Workload Units / Hour (UPP Hours Only)
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	No	[illegible]	[illegible]	[illegible]	[illegible]
Yes	No	[illegible]	[illegible]	[illegible]	[illegible]
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	No	[illegible]	[illegible]	[illegible]	[illegible]
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
No	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	**Yes**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Yes	No	[illegible]	[illegible]	[illegible]	[illegible]
No	No	[illegible]	[illegible]	[illegible]	[illegible]
Yes	Yes	[illegible]	[illegible]	[illegible]	[illegible]
Yes	No	[illegible]	[illegible]	[illegible]	[illegible]
No	No	[illegible]	[illegible]	[illegible]	[illegible]
Yes	No	[illegible]	[illegible]	[illegible]	[illegible]
			Mean		[illegible]
			25th Percentile		[illegible]
			50th Percentile		[illegible]
			75th Percentile		[illegible]
			Multi-Site, 25th Percentile		[illegible]
			Multi-Site, 75th Percentile		[illegible]
			[illegible] Sites, 25th Percentile		[illegible]
			[illegible] Sites, 75th Percentile		[illegible]

Exhibit 100: Non-Invasive Cardiology Benchmarking by Cost Category (2000/01)

Expense Type	[illegible] Expenses	[illegible] Workload Units	[illegible] Cost per Workload Unit	25th Percentile	Median	75th Percentile
[illegible] Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Medical Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Electrodiagnosis

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]

[illegible]

Respiratory Therapy

[illegible]

[illegible]

[illegible]

[illegible]

Appendix XI: Detailed Financial Benchmarking Results

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]
			[illegible]		[illegible]

Respiratory Therapy

Exhibit 105: Respiratory Therapy Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

[illegible]	[illegible]	[illegible]	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			Mean		[illegible]			[illegible]
			25th Percentile		[illegible]			[illegible]
			50th Percentile		[illegible]			[illegible]
			75th Percentile		[illegible]			[illegible]
			[illegible] 25th Percentile		[illegible]			[illegible]
			[illegible] 50th Percentile		[illegible]			[illegible]
			[illegible] 25th Percentile		[illegible]			[illegible]
			[illegible] 50th Percentile		[illegible]			[illegible]

Exhibit 106: Respiratory Therapy Benchmarking by Cost Category (2000/01)

Expense Type	00/01 Expenses	00/01 Workload Units	00/01 Cost per Workload Unit	25th Percentile	Median	75th Percentile
[illegible] Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPP Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Medical Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Compensation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Supplies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sundry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Pharmacy

Exhibit 105: Pharmacy Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (Excluding Drugs) (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Alloc Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Grand River	$808,672	2867??13	$1.31	$771,395	24,320	$31.73
North York Gen	$2,117,240	1336023	$1.59	$1,794,545	37,224	$48.31
Windsor Reg	$5,351,157	7368675	$1.45	$2,974,525	50,049	$58.75
St Joseph - Ham	$1,308,329	4171252	$1.47	$1,228,346	36,274	$33.87
Lakeridge	$3,144,208	3080864	$1.54	$2,317,495	38,315	$60.66
Royal Victoria	$1,163,400	1037445	$1.14	$890,450	21,524	$41.39
Sault Area Hosps	$1,265,408	1793309	$1.63	$849,560	17,828	$47.64
Rouge Valley	$3,414,645	4031586	$1.13	$2,455,511	36,446	$68.15
Credit Valley	$2,803,955	3782085	$1.74	$2,671,315	25,113	$106.36
Peterborough Civ	$1,685,545	1561794	$1.86	$1,461,524	24,441	$61.79
Trillium	$2,781,353	3147306	$1.88	$2,216,615	41,158	$53.88
Humber River	$2,757,952	2982875	$1.12	$2,287,745	45,572	$50.42
Thunder Bay Reg	$1,746,071	1863245	$1.14	$1,376,128	27,493	$50.37
William Osler	$4,091,403	4217753	$1.57	$3,492,156	52,552	$66.31
North Bay Gen	$894,160	739444	$1.21	$719,571	14,555	$49.44
HRSRH	**$2,997,565**	**2157714**	**$1.39**	**$2,[illegible]**	**37,4[illegible]**	**$69.39**
	Mean		$1.75			$56.31
	25th Percentile		$1.52			$47.98
	50th Percentile		$1.75			$55.25
	75th Percentile		$1.92			$62.25
	Mid-Size 25th Percentile		$1.14			$49.44
	Mid-Size 50th Percentile		$1.46			$56.37
	Northern/Sole 25th Percentile		$1.55			$46.15
	Northern/Sole 50th Percentile		$1.76			$53.66

Exhibit 106: Pharmacy Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	-$177,491	2,157,714	-$0.08	-$0.05	-$0.03	-$0.01
MOS Compensation	$109,513	2,157,714	$0.05	$0.05	$0.06	$0.07
UPP Compensation	$2,803,898	2,157,714	$1.30	$0.48	$0.59	$0.80
Total Compensation	$2,913,411	2,157,714	$1.35	$0.54	$0.66	$0.88
Supplies	$234,622	2,157,714	$0.11	$0.03	$0.03	$0.04
Sundry	$23,648	2,157,714	$0.01	$0.01	$0.01	$0.02
Equipment	$3,632	2,157,714	$0.00	$0.00	$0.00	$0.01
Total	$2,997,822	2,157,714	$1.39	$0.54	$0.76	$0.92

Clinical Nutrition

Exhibit 107: Clinical Nutrition Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Multi Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Yes	Yes	Grand River	$815,743	1,638,874	$0.50	$292,897	24,320	$12.04
Yes	No	Humber River	$502,980	929,790	$0.54	$274,196	45,372	$6.04
Yes	Yes	Sault Area Hosps	$329,620	594,406	$0.55	$164,970	17,828	$9.25
Yes	Yes	Peterborough Civ	$273,894	473,176	$0.58	$201,910	24,041	$8.40
Yes	No	Trillium	$538,469	898,351	$0.60	$317,473	41,158	$7.72
Yes	Yes	Windsor Reg	$639,176	1,057,486	$0.60	$356,234	50,945	$6.99
Yes	**Yes**	**HRSRH**	**$495,843**	**808,325**	**$0.61**	**$377,931**	**37,458**	**$10.09**
Yes	Yes	Kingston Gen	$569,143	887,731	$0.64	$465,321	37,408	$12.44
No	No	Credit Valley	$676,618	987,949	$0.68	$308,293	25,165	$12.25
Yes	Yes	North Bay Gen	$127,643	177,530	$0.72	$79,559	14,353	$5.54
Yes	Yes	Thunder Bay Reg	$348,284	477,082	$0.73	$243,654	27,895	$8.73
Yes	No	Lakeridge	$518,885	706,303	$0.73	$220,307	38,203	$5.77
Yes	No	North York Gen	$1,039,074	1,383,585	$0.75	$657,463	37,224	$17.66
Yes	No	William Osler	$839,406	1,043,462	$0.80	$464,956	52,352	$8.88
No	Yes	Royal Victoria	$350,019	399,856	$0.88	$135,945	21,320	$6.38
No	No	St. Joseph - Ham	$860,366	719,394	$1.20	$536,450	36,276	$14.79
Yes	No	Rouge Valley	$451,312	341,575	$1.32	$271,486	36,006	$7.54
			Mean		$0.73			$9.44
			25th Percentile		$0.60			$6.99
			50th Percentile		$0.68			$8.73
			75th Percentile		$0.75			$12.04
			Multi Site 25th Percentile		$0.58			$7.13
			Multi Site 50th Percentile		$0.63			$8.57
			Northern/Sole 25th Percentil		$0.58			$6.99
			Northern/Sole 50th Percentil		$0.61			$8.73

Exhibit 108: Clinical Nutrition Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$142	808,325	$0.00	$0.00	$0.01	$0.08
UPP Compensation	$503,545	808,325	$0.62	$0.60	$0.66	$0.71
Total Compensation	$503,687	808,325	$0.62	$0.60	$0.67	$0.75
Supplies	$3,952	808,325	$0.00	$0.00	$0.00	$0.01
Sundry	-$11,022	808,325	-$0.01	$0.00	$0.00	$0.01
Total	$496,617	808,325	$0.61	$0.60	$0.69	$0.75

Not used in presentation

Pharmacy

Exhibit 105: Pharmacy Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (Excluding Drugs) (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Grand River	$858,672	2860713	$0.30	$771,591	24,320	$31.73
North York Gen	$2,117,245	5550521	$0.38	$1,790,343	37,224	$48.10
Windsor Reg	$3,319,037	7398975	$0.45	$2,994,923	50,943	$58.79
St. Joseph - Ham	$1,968,529	4170252	$0.47	$1,228,546	36,276	$33.87
Lakeridge	$3,044,208	5648464	$0.54	$2,317,493	38,203	$60.66
Royal Victoria	$1,063,400	1657445	$0.64	$886,630	21,320	$41.59
Sault Area Hosps	$1,163,458	1783559	$0.65	$849,360	17,828	$47.64
Rouge Valley	$3,064,643	4691386	$0.65	$2,455,311	36,006	$68.19
Credit Valley	$2,809,095	3782583	$0.74	$2,676,503	25,165	$106.36
Peterborough Civ	$1,683,345	1961794	$0.86	$1,461,324	24,041	$60.78
Trillium	$2,781,353	3147558	$0.88	$2,216,605	41,138	$53.88
Humber River	$2,737,952	2982173	$0.92	$2,287,743	45,372	$50.42
Thunder Bay Reg	$1,746,571	1865243	$0.94	$1,578,028	27,895	$56.57
William Osler	$4,081,410	4217765	$0.97	$3,482,056	52,352	$66.51
North Bay Gen	$894,949	739044	$1.21	$709,571	14,353	$49.44
HRSRH	**$2,997,707**	**2157714**	**$1.39**	**$2,606,823**	**37,458**	**$69.59**
	Mean		$0.75			$56.51
	25th Percentile		$0.52			$47.98
	50th Percentile		$0.70			$55.23
	75th Percentile		$0.92			$62.22
	Multi Site 25th Percentile		$0.54			$49.44
	Multi Site 50th Percentile		$0.86			$56.57
	Northern/Sole 25th Percentile		$0.59			$46.13
	Northern/Sole 50th Percentile		$0.76			$53.00

Exhibit 106: Pharmacy Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
Allowable Recoveries	-$177,491	2,157,714	-$0.08	-$0.05	-$0.03	-$0.01
MOS Compensation	$109,513	2,157,714	$0.05	$0.05	$0.06	$0.07
UPP Compensation	$2,803,898	2,157,714	$1.30	$0.48	$0.59	$0.80
Total Compensation	$2,913,411	2,157,714	$1.35	$0.54	$0.66	$0.88
Supplies	$234,622	2,157,714	$0.11	$0.03	$0.03	$0.04
Sundry	$23,648	2,157,714	$0.01	$0.01	$0.01	$0.02
Equipment	$3,632	2,157,714	$0.00	$0.00	$0.00	$0.01
Total	$2,997,822	2,157,714	$1.39	$0.54	$0.76	$0.92

Clinical Nutrition

Exhibit 107: Clinical Nutrition Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Multi Site	*Northern / Sole Provider*	*Facility Description*	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Yes	Yes	Grand River	$815,743	1,638,874	$0.50	$292,897	24,320	$12.04
Yes	No	Humber River	$502,900	929,790	$0.54	$274,196	45,372	$6.04
Yes	Yes	Sault Area Hosps	$329,620	594,496	$0.55	$164,970	17,828	$9.25
Yes	Yes	Peterborough Civ	$273,894	473,176	$0.58	$201,910	24,041	$8.40
Yes	No	Trillium	$538,469	898,351	$0.60	$317,473	41,138	$7.72
Yes	Yes	Windsor Reg	$639,176	1,057,486	$0.60	$356,234	50,943	$6.99
Yes	**Yes**	**HRSRH**	**$495,843**	**808,325**	**$0.61**	**$377,931**	**37,458**	**$10.09**
Yes	Yes	Kingston Gen	$569,143	887,731	$0.64	$465,321	37,408	$12.44
No	No	Credit Valley	$676,618	987,949	$0.68	$308,293	25,165	$12.25
Yes	Yes	North Bay Gen	$127,643	177,530	$0.72	$79,559	14,353	$5.54
Yes	Yes	Thunder Bay Reg	$348,284	477,082	$0.73	$243,654	27,895	$8.73
Yes	No	Lakeridge	$518,885	706,303	$0.73	$220,307	38,203	$5.77
Yes	No	North York Gen	$1,039,074	1,383,585	$0.75	$657,463	37,224	$17.66
Yes	No	William Osler	$839,496	1,043,462	$0.80	$464,956	52,352	$8.88
No	Yes	Royal Victoria	$350,019	399,856	$0.88	$135,945	21,320	$6.38
No	No	St. Joseph - Ham	$860,366	719,594	$1.20	$536,450	36,276	$14.79
Yes	No	Rouge Valley	$451,312	341,575	$1.32	$271,486	36,006	$7.54
			Mean		$0.73			$9.44
			25th Percentile		$0.60			$6.99
			50th Percentile		$0.68			$8.73
			75th Percentile		$0.75			$12.04
			Multi Site 25th Percentile		$0.58			$7.13
			Multi Site 50th Percentile		$0.63			$8.57
			Northern/Sole 25th Percentil		$0.58			$6.99
			Northern/Sole 50th Percentil		$0.61			$8.73

Exhibit 108: Clinical Nutrition Benchmarking by Cost Category (2000/01)

Expense Type	*HRSRH Expenses*	*HRSRH Workload Units*	*HRSRH Cost per Workload Unit*	*25th Percentile*	*Median*	*75th Percentile*
MOS Compensation	$142	808,325	$0.00	$0.00	$0.01	$0.08
UPP Compensation	$503,545	808,325	$0.62	$0.60	$0.66	$0.71
Total Compensation	$503,687	808,325	$0.62	$0.60	$0.67	$0.75
Supplies	$3,952	808,325	$0.00	$0.00	$0.00	$0.01
Sundry	-$11,022	808,325	-$0.01	$0.00	$0.00	$0.01
Total	$496,617	808,325	$0.61	$0.60	$0.69	$0.75

Not used in presentation

Physiotherapy

Exhibit 109: Physiotherapy Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Trillium	$2,341,084	4,040,652	$0.58	$817,270	41,138	$19.87
St. Joseph - Ham	$1,555,022	2,677,636	$0.58	$965,954	36,276	$26.63
William Osler	$2,053,549	3,437,282	$0.60	$1,242,217	52,352	$23.73
HRSRH	**$1,720,212**	**2,860,975**	**$0.60**	**$939,109**	**37,458**	**$25.07**
Sault Area Hosps	$768,996	1,236,126	$0.62	$215,826	17,828	$12.11
Peterborough Civ	$1,488,795	2,320,841	$0.64	$608,060	24,041	$25.29
Kingston Gen	$1,062,850	1,633,137	$0.65	$1,058,921	37,408	$28.31
North Bay Gen	$726,203	1,076,020	$0.67	$307,132	14,353	$21.40
Royal Victoria	$1,224,121	1,749,480	$0.70	$418,871	21,320	$19.65
Rouge Valley	$1,856,377	2,629,080	$0.71	$588,193	36,006	$16.34
Humber River	$1,941,931	2,694,436	$0.72	$1,149,385	45,372	$25.33
Grand River	$1,283,312	1,675,399	$0.77	$475,560	24,320	$19.55
Thunder Bay Reg	$1,014,953	1,260,175	$0.81	$693,726	27,895	$24.87
Credit Valley	$1,643,261	1,973,117	$0.83	$395,275	25,165	$15.71
Windsor Reg	$2,379,093	2,723,019	$0.87	$1,050,301	50,943	$20.62
North York Gen	$1,937,732	1,853,353	$1.05	$1,372,767	37,224	$36.88
Lakeridge	$3,511,359	3,285,095	$1.07	$770,150	38,203	$20.16
	Mean		$0.73			$22.44
	25th Percentile		$0.62			$19.65
	50th Percentile		$0.70			$21.40
	75th Percentile		$0.81			$25.29
	Multi Site 25th Percentile		$0.63			$19.94
	Multi Site 50th Percentile		$0.69			$22.56
	Northern/Sole 25th Percentile		$0.64			$19.65
	Northern/Sole 50th Percentile		$0.67			$21.40

Occupational Therapy

Exhibit 110: Occupational Therapy Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Unit*	*Net Functional Centre Expenses / Workload Unit*	*2000/2001 Functional Centre Acute Net Expenses*	*2000/2001 Weighted Cases*	*Expenses/ Weighted Case*
Trillium	$1,178,983	2,643,971	$0.45	$353,115	41,138	$8.58
St. Joseph - Ham	$553,537	1,001,750	$0.55	$265,091	36,276	$7.31
Sault Area Hosps	$348,520	594,491	$0.59	$68,795	17,820	$3.86
Kingston Gen	$196,346	330,287	$0.59	$196,346	37,400	$5.25
HRSRH	**$1,112,052**	**1,811,701**	**$0.61**	**$358,384**	**37,458**	**$9.57**
Peterborough Civ	$603,654	967,475	$0.62	$232,661	24,041	$9.68
Royal Victoria	$635,887	999,266	$0.64	$132,957	21,320	$6.24
North York Gen	$980,488	1,490,245	$0.66	$504,463	37,224	$13.55
William Osler	$1,049,291	1,509,833	$0.69	$293,870	52,352	$5.61
Thunder Bay Reg	$310,876	435,539	$0.71	$270,531	27,895	$9.70
Grand River	$1,374,363	1,859,396	$0.74	$366,895	24,320	$15.09
Lakeridge	$903,371	1,221,494	$0.74	$150,591	38,209	$3.94
Windsor Reg	$1,353,150	1,754,624	$0.77	$487,632	50,947	$9.57
Humber River	$750,518	964,687	$0.78	$458,824	45,372	$10.11
North Bay Gen	$134,693	171,985	$0.78	$16,330	14,353	$1.14
Credit Valley	$1,019,926	1,240,282	$0.82	$209,090	25,165	$8.31
Rouge Valley	$867,893	999,786	$0.87	$147,981	36,000	$4.11
	Mean		$0.68			$7.74
	25th Percentile		$0.61			$5.25
	50th Percentile		$0.69			$8.31
	75th Percentile		$0.77			$9.68
	Multi Site 25th Percentile		$0.62			$4.39
	Multi Site 50th Percentile		$0.70			$9.08
	Northern/Sole 25th Percentile		$0.61			$5.25
	Northern/Sole 50th Percentile		$0.64			$9.57

Physiotherapy

Exhibit 109: Physiotherapy Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Acute Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Trillium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HRSRH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peterborough Co	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	Multi-Site 25th Percentile		[illegible]			[illegible]
	Multi-Site 50th Percentile		[illegible]			[illegible]
	Northern Tele 25th Percentile		[illegible]			[illegible]
	Northern Tele 50th Percentile		[illegible]			[illegible]

Occupational Therapy

Exhibit 110: Occupational Therapy Functional Centre Benchmarking – Expenses per Workload Unit and Expenses per Weighted Case (2000/01)

Facility Description	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Total Net Expenses	2000/2001 Weighted Cases	Expenses / Weighted Case
Oshawa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Joseph's - Ham	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**
Peterborough Civ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Royal Victoria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lakeridge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Bay Gen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]
	[illegible] 25th Percentile		[illegible]			[illegible]
	[illegible] 50th Percentile		[illegible]			[illegible]

Audiology/Speech Language Pathology

Exhibit [illegible]: Audiology/Speech Language Pathology Functional Centre Benchmarking - Expense per Workload Unit and Expense per Weighted Case (2000/01)

[illegible]	2000/2001 Functional Centre Net Expenses	2000/2001 Workload Units	Net Functional Centre Expenses / Workload Unit	2000/2001 Functional Centre Total Net Expenses	2000/2001 Weighted Cases	Expense / Weighted Case
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Mean		[illegible]			[illegible]
	25th Percentile		[illegible]			[illegible]
	50th Percentile		[illegible]			[illegible]
	75th Percentile		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Social Work

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Audiology/Speech Language Pathology

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Appendix [illegible]: [illegible] Financial Benchmarking Results

Social Work

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]
	[illegible]		[illegible]			[illegible]

Psychology

Exhibit 115: Psychology Functional Centre Benchmarking - Expense per Workload Unit (2002/03)

Facility Description	2002/2003 Functional Centre Net Expense	2002/2003 Workload Units	Net Functional Centre Expense / Workload Unit
Peterborough Civ	[illegible]	[illegible]	[illegible]
Rouge Valley	[illegible]	[illegible]	[illegible]
Thunder Bay Reg	[illegible]	[illegible]	[illegible]
Trillium	[illegible]	[illegible]	[illegible]
North York Gen	[illegible]	[illegible]	[illegible]
Sault Area Hosp	[illegible]	[illegible]	[illegible]
St. Joseph - Ham	[illegible]	[illegible]	[illegible]
Windsor Reg	[illegible]	[illegible]	[illegible]
Humber River	[illegible]	[illegible]	[illegible]
Kingston Gen	[illegible]	[illegible]	[illegible]
Credit Valley	[illegible]	[illegible]	[illegible]
William Osler	[illegible]	[illegible]	[illegible]
[illegible]	**[illegible]**	**[illegible]**	**[illegible]**
	Mean		[illegible]
	25th Percentile		[illegible]
	50th Percentile		[illegible]
	75th Percentile		[illegible]
	Hosp Size 25th Percentile		[illegible]
	Hosp Size 50th Percentile		[illegible]
	[illegible] 25th Percentile		[illegible]
	[illegible] 50th Percentile		[illegible]

Psychology

Exhibit 113: Psychology Functional Centre Benchmarking– Expenses per Workload Unit (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*
Peterborough Civ	$143,429	236,115	$0.61
Rouge Valley	$443,222	604,560	$0.73
Thunder Bay Reg	$245,667	332,540	$0.74
Trillium	$411,244	522,335	$0.79
North York Gen	$671,984	816,119	$0.82
Sault Area Hosps	$294,708	323,400	$0.91
St. Joseph - Ham	$430,777	464,623	$0.93
Windsor Reg	$296,614	318,926	$0.93
Humber River	$258,361	232,380	$1.11
Kingston Gen	$134,524	93,108	$1.44
Credit Valley	$1,197,287	787,296	$1.52
William Osler	$434,140	214,044	$2.03
HRSRH	**$346,322**	**119,406**	**$2.90**
	Mean		$1.19
	25th Percentile		$0.79
	50th Percentile		$0.93
	75th Percentile		$1.44
	Multi Site 25th Percentile		$0.76
	Multi Site 50th Percentile		$0.91
	Northern/Sole 25th Percentile		$0.78
	Northern/Sole 50th Percentile		$0.92

Recreation

Exhibit 114: Recreation Functional Centre Benchmarking – Expenses per Workload (2000/01)

Facility Description	*2000/2001 Functional Centre Net Expenses*	*2000/2001 Workload Units*	*Net Functional Centre Expenses / Workload Unit*
Trillium	$62,663	183,009	$0.34
Peterborough Civ	$157,251	437,852	$0.36
William Osler	$214,146	568,474	$0.38
Thunder Bay Reg	$20,163	46,069	$0.44
Humber River	$49,047	103,440	$0.47
Royal Victoria	$75,279	156,893	$0.48
Sault Area Hosps	$171,292	347,792	$0.49
St. Joseph - Ham	$201,535	362,953	$0.56
North Bay Gen	$66,572	108,470	$0.61
HRSRH	$213,704	342,819	$0.62
Rouge Valley	$155,634	240,540	$0.65
Windsor Reg	$139,668	214,557	$0.65
Grand River	$190,069	284,265	$0.67
Credit Valley	$282,267	413,379	$0.68
Lakeridge	$392,035	519,498	$0.75
North York Gen	$200,094	96,862	$2.07
	Mean		$0.64
	25th Percentile		$0.47
	50th Percentile		$0.58
	75th Percentile		$0.66
	Multi Site 25th Percentile		$0.41
	Multi Site 50th Percentile		$0.62
	Northern/Sole 25th Percentile		$0.45
	Northern/Sole 50th Percentile		$0.55